



THE RHODESIAN Agricultural Journal.

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APRIL, 1909.

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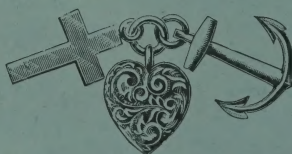
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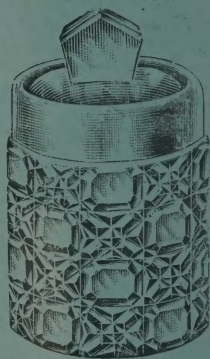
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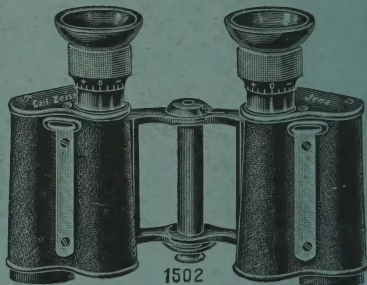
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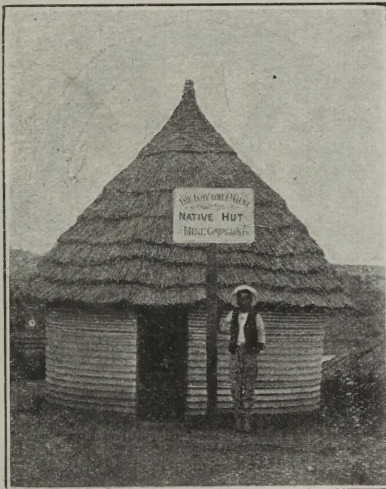
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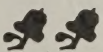
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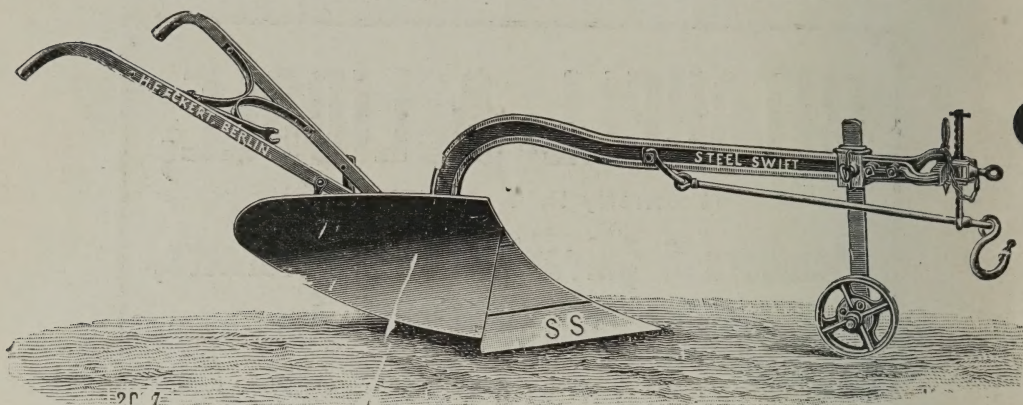
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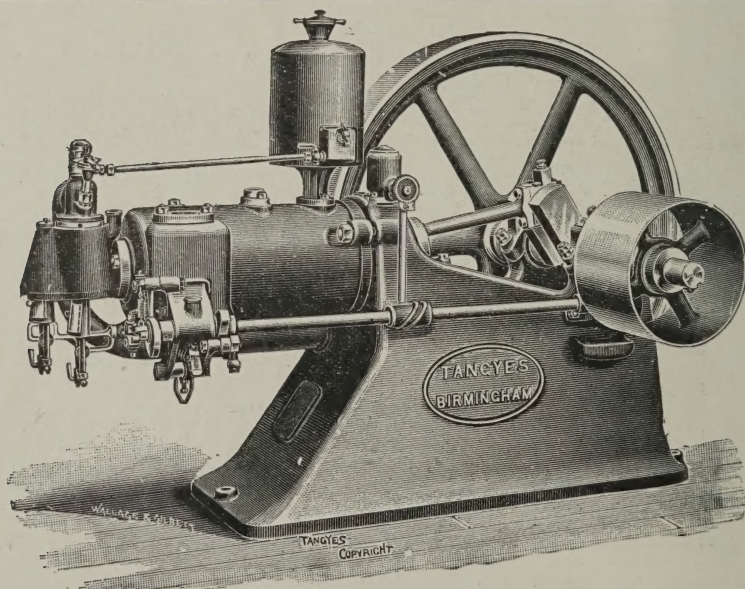
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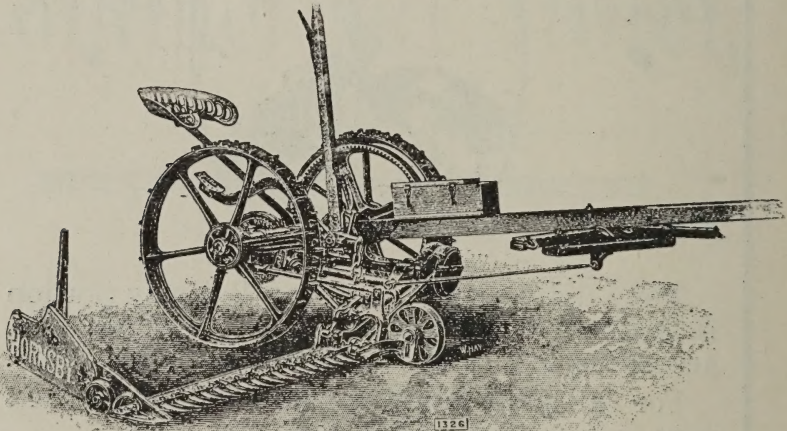
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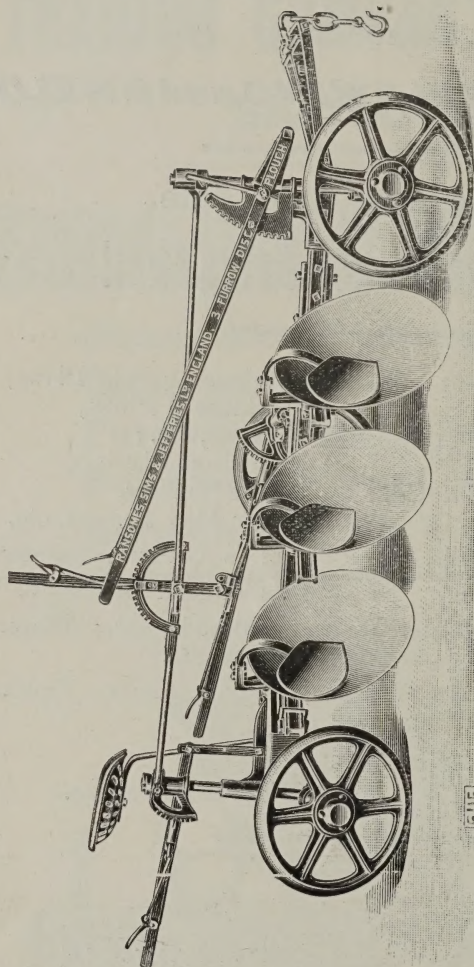
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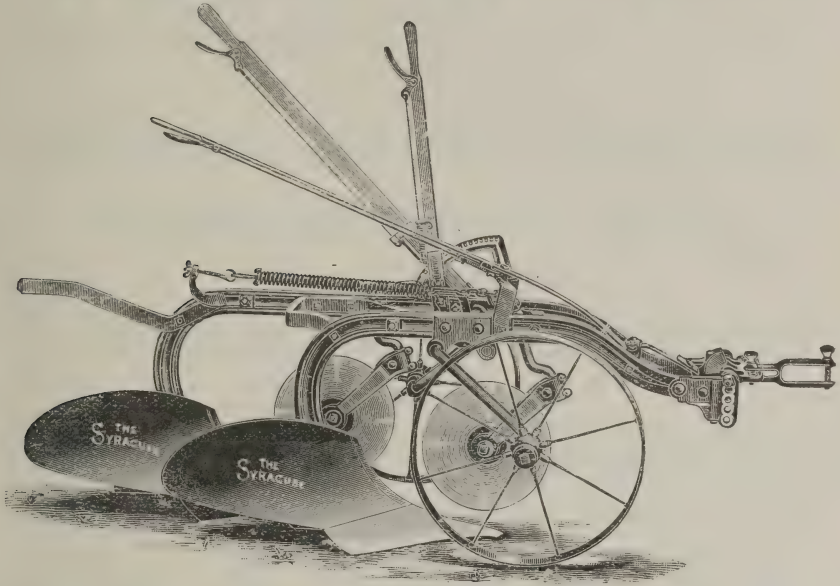
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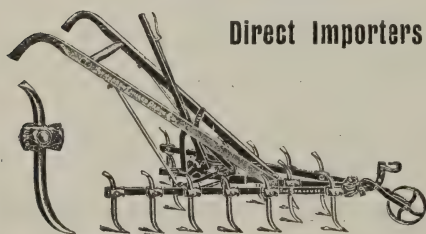
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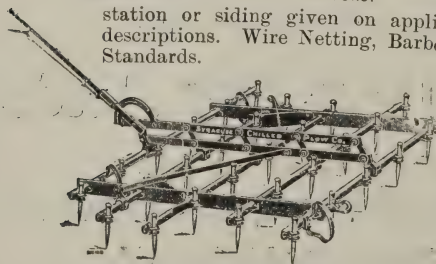
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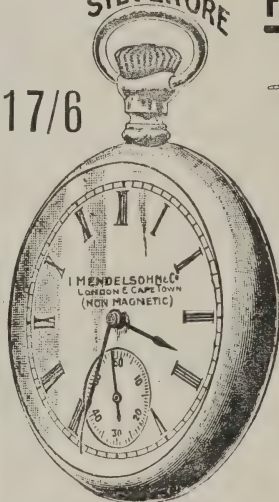
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VOL. VI.—No. 4.]

APRIL, 1909.

[5s. per annum.

Editorial.

The harvest prospects in Southern Rhodesia are of the most hopeful kind, the maize crop giving a most abundant yield in nearly every district of Matabeleland and Mashonaland.

With the dry sunny weather prevailing at this season the maize will ripen in a satisfactory manner, and thus every promise is given that both in bulk and excellence of sample the maize crop this year will be considerably above the average.

Other crops, Kaffir corn, millet, manna, etc., are also of more than average bulk. The wheat that was experimented with this season, as a rust-resisting summer crop, has unfortunately failed in maintaining that character in Rhodesia. So far we have received no reports, that, where it was sown in December, it escaped being severely rusted. The continuously damp weather in January and February favoured rust attack and was fatal to wheat; but maize, although affected in many instances, has come on to ripening without being seriously injured—the plants being so strong and vigorous having resisted the attack.

As will be seen in the notice in another column, farmers are invited to make some experiments with varieties of wheat and other cereals as autumn-sown crops. Although there are no doubt a good many places where, by sowing in March or April in damp loams, both wheat and barley will yield a crop without irrigation, yet, if growing wheat is to be pursued on a large scale throughout the country,

irrigation must be provided in order to secure the best returns. It must be noted that the introduction of the very best varieties of seed at the outset of grain growing, will have the greatest influence on the value of the product commercially.

Although the need of making provision for a water supply does not strike one as being very obvious after such a heavy rainfall, yet nothing is more certain than a long period of drought supervening, with its accompanying effects on the water supply of farms before the next season's rains. The services of Mr. H. M. Oakley will be most welcome in affording some more information to farmers regarding the underground supplies in the different districts, and the best measures to take in making these stores available.

A good many water bores have been put down already in Matabeleland, and other farmers will be encouraged to proceed on receiving more definite information as to the prospects of obtaining at a moderate cost a much-needed supply of pure water.

The farmers in the Bubi district are to be complimented in taking the lead in having the Fencing Ordinance put in force. The work of fencing is, perhaps, the most urgently necessary among all the schemes put forward for improving the methods of carrying on agriculture in Rhodesia. Once accomplished in this district the advantages will soon be apparent when other districts will have to take the matter up in order to keep with the times.

The lecture on Rhodesia, by Professor Wallace, at the Royal Colonial Institute, appears in this issue, together with the subsequent discussion at the meeting.

Farmers will have the opportunity of reading an eminent agriculturist's impressions of Rhodesia after paying it a visit, and can compare these impressions with the facts they are dealing with as actually experienced.

We are glad to be able to report that the Shorthorn and Aberdeen-Angus bulls, imported by Mr. Williamson, are doing very well. Three of the Aberdeen-Angus animals, although stabled on arrival, contracted Redwater, had a severe re-action and recovered.

Mr. Zimmermann, Darwindale, inoculated his bulls (six) and unfortunately lost one Shorthorn.

Considering that these animals were imported in the middle of summer, when Redwater is most virulent, the results are most satisfactory.

Regulations have been promulgated prohibiting the introduction of cattle from North of the Zambezi. Importations via Feira cease at once, except for cattle for introduction of which permits had been issued prior to the date of the notice.

Slaughter cattle will be allowed in via Victoria Falls until 14th May, and breeding cattle from 1st April to 14th May, after which date no further importations will be permitted. These steps have been decided upon in consequence of the existence of a disease near Broken Hill and Fort Jameson, caused by the *Trypanosome Dimorphon*. Clinically the disease is distinguishable from the ordinary Tsetse fly disease of Zululand and this country. But according to some observers it can be transmitted by ordinary biting flies, and herein lies the danger.

Further investigations will be made, and it is hoped that the disease will be found to be no more serious than the ordinary fly disease, and that the Regulations now in force will not be permanent.

Rhodesia and its Agricultural Possibilities.

Paper read before the Royal Colonial Institute by Professor ROBERT WALLACE, F.L.S., F.R.S.E. (Professor of Agriculture and Rural Economy in the University of Edinburgh).

(From the "Journal of the Royal Colonial Institute.")

When the British South Africa Company in 1889 acquired by Royal Charter its patent to occupy and govern Rhodesia, the area of the country was provisionally estimated at 750,000 square miles, but the actual extent since the delimitation of the Portuguese frontier on the West has been less than 440,000 square miles: made up of North-Eastern Rhodesia, estimated at 109,000, and North-Western Rhodesia at 182,000 square miles, together with Southern Rhodesia with 148,575 square miles. Even in its reduced dimensions the territory is a magnificent heritage wrested from barbarism by the enterprise and foresight of Cecil Rhodes and brought under the civilising influence of the British Imperial Crown.

It is to Southern Rhodesia, which comprises about one-third of the whole, and is separated from the Northern provinces by the river Zambesi, that special attention will be drawn to-night, because it was to that province I paid a visit of agricultural investigation by instruction of the British South Africa Company during the months of July and August of last year, when every facility was provided so that the best use could be made of the available time to see representative samples of everything which fell within the sphere of the proposed survey. Excursions were organised from the two capital centres. From Bulawayo, erected on the site of Lobengula's Royal Kraal, with in 1907 a white population of 3,502, Matabeleland was inspected, and from Salisbury, with its 1,685 whites, Mashonaland.

The altitude of the great central plateau on which Rhodesia rests ranges from 3,500 to 6,000 feet above sea level. There are depressions great and small in the river valleys, and there are a few low local mountain ranges, besides a section of the great mountain midrib of South and Central Africa familiar to all in the earlier settled regions by the name of Drakensberg Mountains. This range forms the eastern boundary of Southern Rhodesia in the mountainous country of Mafeking and Inyanga, both noted for the sweetness of their pasture and for their special suitability to woolled sheep. Being south of the Equator the seasons in Rhodesia are the reverse of our own. During this dead month of winter Rhodesia is experiencing the counterpart of our July. But the climate of this most delightful of all the tropical countries I have visited is not only moderated by its elevated position, but tempered by the six hot months—*i.e.*, from about the end of October till the beginning of April—being also the wet months. During this period most of the crops which are essentially tropical are grown without any call for artificial watering, but the crops of more temperate climes can be raised during winter by aid of irrigation or by taking the opportunity to plant them on damp hollows too wet for cultivation, or for the growth of crops in the wet season. By these means wheat, which would be completely destroyed by rust at any other period of the year, can be successfully raised on restricted areas.

The course of the trunk line of railway to Salisbury and the north has been rightly located along a great central ridge or watershed that traverses the healthiest

part of Southern Rhodesia. Near the railway the soil is not so good in many places as it is further off, and especially in the lower river valleys, where the pasture is sweet and most desirable for winter grazing of cattle; but there the climate is not so favourable at this early stage of development for the residence of Europeans.

The total white population recorded in the census of September, 1907, was 14,018, and the most likely estimate of the total number of farmers in Southern Rhodesia falls considerably below 1,000. The total native population at that time amounted to 662,600, made up of 445,000 in Mashonaland and 217,000 in Matabeleland. The chief industry of the country has been gold-mining, which in recent years has pretty steadily advanced in spite of the disadvantages of high railway rates on machinery and other mining necessities, and the very high and sometimes enormous prices that had to be paid for the food of the people employed. The rate of progress may be gauged by a glance at the following official return of output:—

	Ounces.
November, 1891—December, 1898	22,911
January—December, 1899	56,742
January—December, 1900	85,367
January—December, 1901	172,035
January—December, 1902	194,170
January—December, 1903	231,872
January—December, 1904	267,737
January—December, 1905	407,048
January—December, 1906	551,895
January—December, 1907	612,053

Total 2,601,830*

Value about £9,300,000.

It was in the year just closed that the total output of £10,000,000 worth of gold since the Chartered Company began operations was passed—a creditable and promising performance when the difficulties with which the enterprise has had to contend are taken into consideration. The great majority of the mines have been established on the sites of ancient workings, where from the extent

* January—December, 1908 606,962 ounces [Ed].

of plainly visible surface disturbances large quantities of gold must have been extracted. Although it has not yet proved to be the El Dorado that Rhodes and the early pioneers anticipated, it is safe to conclude from its past record, from its proved reefs, and from its vast unexplored possibilities, that Rhodesia is destined to be one of the great gold-yielding countries of the world.

The initial mistake made in regard to the development of Rhodesia was trusting too exclusively to gold-mining to develop its general prosperity, and neglecting to offer fitting encouragement to more of the right class of settlers to occupy the land. Not only has the country as a whole suffered, but the mining interests have also seriously suffered because of the excessive prices which have had to be paid for food that had to be imported and that might have been grown to advantage at hand.

I hope that in this respect a new era is about to dawn, and it is now fully understood that the first step of importance in developing the country must be to secure during the next five years at least 2,000 specially selected farmers with sufficient capital to take up and settle a large area of land now lying derelict and worthless. Till a considerable accession to the farming population is made it will be impossible, from lack of numbers, for them to organise a co-operative system of marketing their surplus produce in Britain, where alone they can depend upon establishing bedrock prices. With the growth of the mining industry, which looks particularly hopeful, in the line of from three to five or even ten stamp batteries, there will be a growing local demand for all classes of farm produce, but, with only a local market to depend on, the danger of it becoming overstocked is too great to permit the building of a prosperous farming industry.

Rhodesia is pre-eminently a cattle country. Agriculture, or rather tillage, is practised, of course, for the support of the native population and the European workers on the mines, and it will continue to extend, as we have already indicated, with the increase of population, but as a means for the development of the country it is quite out of the question for the following among other reasons:—(1) The extent of really good arable land is small in relation to the area of the country. (2) The tropical products which do well under favourable circumstances in certain years—for example, tobacco and fibre

—are too expensive to work, require too much technical knowledge, and are too risky, from the points of view of production and of marketing, for a pioneer settler to depend upon them as his mainstay. In the mealie crop, which grows excellently and does not conform to this category, there is not sufficient inducement in the possible few shillings a bag of profit on which to develop a country. (3) The supply of native labour is so deficient, unreliable, and disorganised, not to say costly, that with even a better agricultural subject than Rhodesia, it would be practically impossible to make cultivation pay on a wholesale basis, which it would do if it were made the means by which the country could be settled.

The competition of the mines has raised the wages so that a piccaninny without experience begins to learn to work at 5s. per month, and an ordinary farm hand averages 15s. a month and food. A full-grown man consumes per day a little over two and a-half pounds of mealie meal, or its equivalent in other food grains, which are sometimes locally preferred. The extent to which wages have been artificially raised may be gathered from the fact that the wage of an ordinary native cultivator in Nyasaland, which also supplies much labour to the Rhodesian mines, is only 5s. a month and food. "Boys" who are expert drivers command much higher wages than ordinary labourers in any part of South Africa.

It is asserted by authority that on two occasions within comparatively recent years 90 per cent. of the cattle of Rhodesia died. On the first of these the cause was rinderpest, which comes from the North, and was referred to, though not by name, in Joseph Thomson's "Through Masai Land." The second devastation was by East Coast Fever, a parasite blood disorder distantly related to Texas or Redwater fever, which, like it, is communicated by tick bite. The disease has probably been endemic from time immemorial in the tropical part of the East African Coast, as is perhaps indicated by the fact that certain of the humped cattle that come from that region are believed to show a greater degree of immunity from this, as they do from other diseases, than do cattle from other parts of the country.

Although disaster has thus twice overtaken the cattle industry, there need be no fear of its recurrence when, as now, all the diseases that could lead to it are understood and the means of prevention known.

That Rhodesia is a great cattle country is no matter of speculation. It was a demonstrated fact in the time of Lobengula, who had immense herds of magnificent cattle, which, tradition says, were divided according to colour into black herds, red herds, and black and white herds. Black and red animals, because usually dark skinned, were then and are still in high favour, although cattle with a black skin under broken-coloured or even white hair are admirably suited to resist the evil influences of a tropical sun which in Rhodesia is specially trying in summer. Lobengula's black cattle composed the Royal herds, from which animals were selected for slaughter on special feast days. The description I have heard from eyewitnesses of the size and quality of these animals, and the few remaining specimens yet to be seen among the common cattle of the country, leave no doubt as to the capability of the country to produce good cattle if they be managed with the skill displayed by the last great Matabele chief and his Indunas, who were also his chief herdsmen. The cattle unfortunately are gone. The Mashona cattle now found in the thickly populated cattle district of Victoria, which escaped the wholesale ravages of disease, and those that remain in Matabeleland, are small in comparison with the original Matabele cattle; but the country which produced them is there. It is true it has run wild, and the pasture has degenerated and gone back into the condition of an unkept wilderness, partly from want of grazing and keeping down, which is an essential in the management of all good grazings in every country, and partly because the tall, withered grass is burnt off every winter by one or other of several groups of law breakers, who are too rarely caught and punished, such as natives in search of game, prospectors looking for gold-bearing reefs, careless travellers or malicious neighbours. The annual burning stops the accumulation of humus, which is invaluable for the retention of soil moisture and for the encouragement of the growth of the finer pasture grasses. The practice of driving cattle into kraals at night to protect them from predatory animals is also injurious to the veld, as it removes from it a considerable proportion of the manure which should go to enrich it. This drain has gone on for a very long time, as natives do not trouble to carry kraal manure back to the fields, and in some districts sites

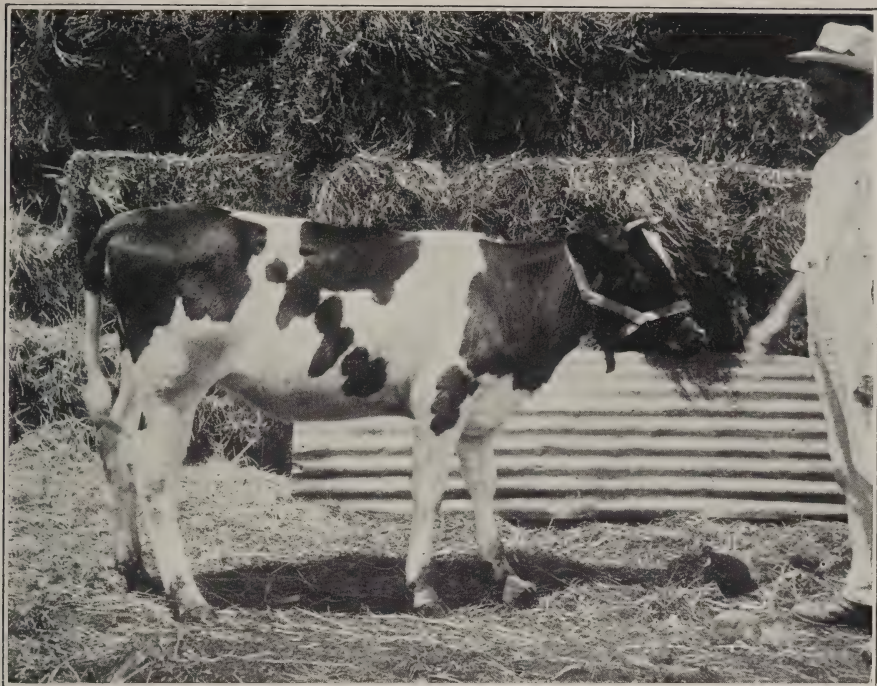


Photo by [R. P. White.
Holstein-Friesland Heifer, imported from U.S. by Messrs. McLaurin Bros., Salisbury.



Photo by [R. P. White.
Holstein-Friesland Bull, imported from U.S. by Messrs. McLaurin Bros., Salisbury.

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of old cattle kraals are now being dug up by white cultivators, and thus the remains of dung thirty years old, with a modicum of its original virtue still in it, is used for the growing of crops.

The first step necessary in the improvement of the pasture land of Rhodesia is to fence it, so that animals may be allowed to run at night and feed as they naturally would do before the sun is hot, and during the winter time when the grass is moist with dew. It is difficult for one who has not seen a tropical country like Rhodesia, where hardly any rain falls for more than six months at a time, to realise how hard and dry the grass becomes by day in winter, how unattractive it is, and how difficult to reach, owing to the sharp and woody character of the strong stems which protrude to prevent animals getting at the little root-foliage that remains.

The pasture of the country has run wild, it is true, but I know of no such grassy wilderness which would respond more readily to well directed methods of regeneration by an unusual number of possible ways. Fires can be to a large extent prevented when the land is fenced and fireguards made to protect it, and these fireguards are easily contrived. Three or four plough furrows drawn round a small area will stop a fire except when a strong wind is blowing. A wider guard can be formed at small cost by dragging, when the grass is green, a bundle of branches round the area to be protected. The grass on being injured becomes withered under the hot sun, and may be burnt off to form a bare belt over which fire would not readily leap in winter.

The eating down of the rank herbage while green refines the pasture, and the cutting of it to lie and rot to accumulate humus or for hay, which can be made in unlimited quantity and of excellent quality at little cost, leads to the refinement of the rank species and to the encouragement of finer grasses on the unoccupied surface between the original coarse tufts.

By such means, under intelligent management, the stock-carrying capacity of Southern Rhodesia could easily be doubled within a limited number of years, and, in the end, land which will only carry one bullock to thirty acres may be made to graze one on ten acres.

The ploughing of land for a short course of cropping also sweetens pasture in a wonderful way, even without

manuring. The grass, for example, on native lands that have been deserted is far more appreciated by cattle than that of the unbroken veld. The sowing of native grasses is unnecessary, as the soil contains abundance of seed ready to germinate, but by the planting of *paspalum*, which has proved to be a great success in Rhodesia on dry land as well as under irrigation, a marked improvement can be introduced when money is available for the purpose.

The fencing, improvement, and stocking of a country necessitates the complete destruction of the big game and the stamping out of lions, which are still numerous in many of the partially settled districts of Southern Rhodesia. Lions always follow big game, and with the one the other must and will quickly disappear. No ordinary wire fence can withstand the stampede of a few large antelopes, who take no notice of it in the dark in a case of sudden alarm, followed by flight. Unless when wounded, lions in Southern Rhodesia are not dangerous to human beings, and a man-eater is practically unknown; but they are specially fond of donkeys, mules, small stock, and young cattle. There can be no satisfactory settlement of a country where the settler has to divide the profits of his enterprise with beasts of prey.

The eland—the heaviest and most ox-like of the big antelopes of Africa—is easily domesticated, and could be farmed to advantage with common cattle, or run alone like them in tame herds. This practice would to a small extent make up for the deficiency of bovine stock in the country. In a mixed herd the eland bull at two years old is master of the most warlike of common bulls, owing to the activity he displays while fighting, and the way he sweeps the arena with his horns, but in escaping from an enemy the eland is the slowest of all the antelopes. It was said of the late President Kruger that, of the many athletic feats to his credit as a young man, he was so fleet of foot he could overtake an eland. Be that as it may, wild eland calves can be easily ridden down and captured without being exhausted, by a well-mounted horseman. Calves cut off from their mothers will run alongside the horse, and are thus amenable to guidance. We heard of eighty calves which had been captured in Rhodesia being sold to the German Government for breeding in German East Africa, and the measure of

success there attained might equally be reached in British territory, when on an extended settlement of the country a ready and appreciative market could be secured for chilled eland beef in Smithfield. A regular supply of this and other big game might in time be made a paying speciality in London if some enterprising sporting company were to lease from the Chartered Company a large area of unoccupied hinterland in the Sebungu and Mafungabusi districts to the north-east of the Wankie Coalfield, and there preserve and breed in a wild state the various species of animals suitable for the purpose.

The native cattle of Rhodesia and other parts of Central Africa are not of a kind, unless when mated with European flesh-producing breeds, to provide beef which would be appreciated in the markets of this country, but they possess some very important qualities that make them admirable foundation stock from which to procure, by crossing, bullocks capable of supplying a highly satisfactory article. They live and thrive where European cattle would die from starvation or from disease; they are prolific, active, sound on their feet, and make excellent trek and plough cattle under the trying influence of a tropical sun, although their points do offend the eye of a man trained only to admire a blocky, rectangular, fleshy form with long, square hindquarters.

The Africander is the largest and best of the considerable number of breeds or varieties with well-defined distinctions. It is now generally of a uniform dark red colour, although at one time quite half the breed was black. It is believed to have been descended from the aboriginal cattle found in the Cape by the Portuguese and crossed with Spanish Peninsular cattle 400 years ago. In comparatively recent times it has been further modified by North Devon bulls, and with this breed, which is also dark red in colour, it mates remarkably well.

The other native breeds—the Mashona, the Modern Matabele, the Mashakalumbi, Barotse, Ponda, and Damaraland—all more or less from a common origin, mate with the Africander, with results which show them to be merely strains of one large family. Africander bulls can thus be used to grade up and unify all these native breeds, but to bring them into line with market requirements in this country a certain degree of early maturity and flesh-forming quality requires, in the first instance,

to be introduced by a first cross with a North Devon or Aberdeen Angus bull on the smaller cows, or of some other beef breed on the large cows—preferably the Sussex, the Shorthorn, the Welsh, and, in spite of the disadvantage of its white soft feet and delicate eyes, the Hereford. The first cross of any of these breeds would be fit for the London frozen or chilled meat market at $4\frac{1}{2}$ to 5 years old, as it is hardy enough to withstand the climate during winter if reasonable care be given to the improvement of the pasture, and if on the hard or sour veld a supply of natural hay be provided in winter.

The conditions of the country are such that cattle with more than half European blood cannot retain their flesh during the latter part of winter, and the second cross must of necessity be by a half-bred bull—preferably the progeny of a cross from an Africander cow by a bull of any of the European breeds named. To keep up uniformity in the future, and to supply a sufficient number of reliable bulls to ordinary breeders of beef cattle, a few breeders should establish herds of each of the successful crosses under the names of Rhodesian North-Devon Africander, Rhodesian Shorthorn-Africander, and so on through the list already given.

Standard bulls of dairy breeds suited to graze on the veld could be formed by mating bulls of the following breeds: Lincoln Red, Holstein, Ayrshire, and Guernsey, with Africander cows or heifers, and by this means two-fold-purpose cows would be produced. In town dairies, where cows are fed all the year round, the best milking strains of pure blood can be kept with greater advantage than any variety of half-bred Africander.

Few horses or mules are bred in Rhodesia, owing to the danger of loss among the breeding stock from horse-sickness. The satisfactory degree of immunity conferred by the use of Dr. Theiler's vaccine for mules has made it possible to breed jennets from properly selected donkey mares which would be worth £20 to £25 each, or more, and be admirably fitted for the light cart work now served by imported mules.

The little common brown donkey is extremely hardy, and has proved to be a valuable slave to the country in the trying times of cattle plague and coast fever, in spite of its slowness at work and its diminutive size. It might be used with advantage for foundation stock from which

to build up through two generations a donkey mare of serviceable size and quality for breeding hinnies, in the same way that the little humped Zebu cattle from German East Africa may be drawn upon to swell the bovine stock of the country. The larger type of common donkey mare, which is already one generation of donkey life nearer our purpose, is to be found in the Cape Colony. It has been bred from the De Beers imported Spanish Jacks, and, being reared in South Africa, it is hardier than any imported European prototype. The Cape donkey mare—11'2 hands and upwards, taken to Rhodesia at £8 to £10 each, mated with the milk-white coated but black skinned Arabian Jack, 12'2 hands high—would produce a she donkey possessing hardiness, activity, quality, and intelligence, admirably suited to breed jennets. The desiderated jennet or hinny—the progeny of the she-ass specially bred to suit Rhodesian conditions, and a thick-set, strong-boned cob—would be an animal more tractable and horse-like than a mule, built on more slender lines but showing no lack of substance, and possessed of plenty of quality.

The white Arabian donkey, numerously represented in Egypt and Zanzibar, possesses the same sort of hardy constitution, capable of withstanding adverse tropical conditions as the humped cattle from Central and East Africa, and it holds the same relation in this respect to Spanish and other European donkeys as do the native cattle of South Africa to pedigree British breeds. The introduction of the hardy blood into the cross with the brown Cape donkey mare is intended to accomplish a similar object to that which will be attained when standard breeds of cattle are specially formed by bulls of European breeds being mated to Africander cows. There is a general law of breeding in connection with the improvement of tropical animals by mating them with European breeds, in relation to which the ass supplies no exception.

Rhodesia at present is too rough to be a good sheep country. Woolled sheep do not thrive except in a few of the mountain districts, as Melsetter and Inyanga, but with frequent dipping to keep ticks in subjection the two varieties of fat-tailed sheep known in South Africa do fairly well. The so-called "Persian" sheep is in reality a small Central African, black-headed, fat-rumped, woolless sheep, recently imported from the hinterland of

Somaliland, and it possesses greater power of resisting the deadly African heart-water disease produced by the bite of a tick which is fatal to woolled sheep, and in a lesser degree to the hairy, fat-tailed sheep of Cape Colony. The two latter cross well together—the hairy sheep confers size on the progeny, and the Persian sheep quality and early maturity. There is no visible reason why sheep should not be kept successfully in many parts of Rhodesia, where the rough pastures are brought under subjection, or when forage and other crops are grown by cultivation to support them.

Putting aside the question of periodic dipping, which is an essential in a tick-infested area, the best possible means for checking the spread of disease among live-stock, as well as for increasing the value of the pasture, in a country like Rhodesia, is fencing. Using galvanised wire, plain and barbed, and the most durable posts, the cost by contract runs up to £40 per mile. New settlers, who, in their own interests, as well as in the interests of the country, should be all bound to ring-fence their holdings before acquiring the titles to the land, might save a substantial part of this sum by doing the erection and hauling themselves at slack seasons with their own boys. Many of the native woods rot rapidly or are destroyed by white ants and borers, so that only a limited number are suitable for fencing purposes as dead timber; but there are several species which can be used to plant as live stakes to grow and support the wires. Some people object to fencing in this way, as the bark envelops and fixes the wire so that it cannot be tightened up when it slackens and sags; but, in spite of all the minor drawbacks, the use of live branches of suitable trees overcomes the most serious difficulty of getting fencing-stakes in some parts of the country.

The trouble and expense of securing straining-posts can now be overcome by adopting the successful New Zealand method of substituting inexpensive stone anchors for costly straining-posts, and straining by a double-handed screw from the centre of the fence; and another deduction from the sum of £40 a mile made in consequence.

Skill in the management of poultry reaps a maximum reward in Rhodesia. Poultry of all kinds treated with a due amount of attention and technical knowledge live

well and pay well. This satisfactory state of things for the man with the necessary experience is in a great measure due to the fact that with neglect good poultry do badly or die out more readily than they would do at Home. Hardy little native fowls, which have for generations lived about the kraals without being systematically fed, survive, and even give better returns in a small way than when supplied with mealies—a too fattening diet; but imported fowls are liable to contract from the native stock diseases to which many succumb, and they should consequently be scrupulously kept apart.

To safeguard them from diseases produced by tick-bite, and to save them from other blood-sucking parasites, it is necessary systematically to dip poultry every fortnight in emulsions of coal-tar products, and to spray the insides of their houses with lysol water, and even to put a few drops of that excellent antiseptic in their drinking-water. The management of poultry requires system and attention; but, nevertheless, it may be made one of the most important and remunerative of the minor industries of the homestead.

Ostrich farming is still in the experimental stage. Rhodesia is the home of the ostrich, and wild birds live and thrive in their natural state, but they are incapable of producing either a satisfactory quantity of feathers or the best quality for the European market. The native hens, like native cows, will form excellent foundation stock on which to bring up the quality by crossing with imported cocks; but, as in the introduction of fine blood in any other species of live-stock, the capacity of the progeny to live is reduced unless a supply of the special food by which the superior animals are maintained can also be provided. Rhodesia is unfortunately not an alfalfa (lucerne) country, and that marvellous forage crop is mainly responsible for the great success of ostrich farming in Cape Colony. The deficiency in lime of Rhodesian soil is at present believed to be at the bottom of the difficulty; although it would be worth while, owing to the absence of wart-like processes on the roots, to give the nitrogen-fixing bacteria a trial by the use of some form of inoculating material. The domesticated ostrich is no exception to the general rule, that in a tick-infested country all farm animals must be regularly and thoroughly dipped.

Mr. C. P. Lounsbury, Entomologist to the Cape of Good Hope, has worked out the life histories of the various ticks known to communicate the blood diseases peculiar to the live-stock of South Africa, and his results have been confirmed by workers in the same field in other Colonies, so that the methods of extermination now adopted are based on the knowledge gained by scientific investigation of the first order. Together with the earlier work done in the United States of America in connection with redwater or Texas fever, the South African investigations form a very comprehensive history of the tick-borne diseases of farm animals.*

There are a number of tropical crops which grow excellently in Rhodesia, and which might be cultivated as important, yet subsidiary, crops in the districts most favourable to arable cultivation; for example, sweet potato, cassava (the tapioca plant), ground or monkey nuts, and castor seed. The two first-mentioned tuber crops can be grown to feed pigs and other animals that receive hand-feeding, and the cassava may be also utilised as human food, not only in the form of a natural vegetable product like the sweet potato, but, as in Southern India, sliced, dried, and ground into a meal, which is admirably fitted to mix with meals made from cereal grains. Monkey-nuts are already grown to a considerable extent by the natives.

There is a specially hopeful future for the castor-seed crop; one of the best indigenous varieties, if not the best, permits of the beans being easily separated by machinery from the husks. In British India, where castor-seed is largely grown, the husking is the great difficulty, except by the native method of plastering the husks over with cow-dung, which, by becoming bone-dry on exposure to the hot sun, splits them open, liberating the beans. The oil will be required in increasing quantities in South Africa for lubricating purposes on the railways and at the mines, and as soon as the extraction of vegetable proteid from the cake residue by Mitchell's process is put on a commercial basis, there will be a ready market at a good price for all that the country can produce.

* See also *Ticks, a Monograph of the Ixodoidea*, by Nuttall, Warburton, Cooper, and Robinson, published by the University Press, Cambridge.



Photo by] | *[R. P. White.*
Friesland Bull, "Sir David." The property of Messrs. McLaurin Bros., Salisbury.



Photo by] *[R. P. White.*
Friesland Calves feeding on Paspalum, bred by, and the property of, Messrs. McLaurin Bros., Salisbury.

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Citrus trees grow well, and, contrary to general experience in other parts of the world, the fruit of many of them reared from seeds rivals that of grafted trees, although, in conformity with Nature's law, seedling trees come more slowly to bearing. For fruit-growers who prefer the orthodox grafted trees an excellent hardy native root stock is available for the purpose in the Mazoe lemon, a hardy tree which bears prolifically a coarse fruit with an extraordinarily rough, thick skin. At present there is no market other than the limited one of the mines and the few large centres of population for surplus fruit, which is found practically unsaleable in such an out-of-the-way place as the Victoria district.

The terrors of locust devastation are not now so great as they once were. The past decade has been fruitful of many invasions, and is likely to be followed by a period of immunity; but of all the thousands of swarms, great and small, which were reported throughout South Africa during the year prior to my visit, it is believed that not more than 1 per cent. of the locusts escaped destruction. Of various means employed the arsenical spray of a potency sufficient to kill the locusts, but not strong enough to poison the cattle that might eat them afterwards, was one of the most effective.

The question of native employment and education is one of the burning questions in South Africa. The demand for labour at the mines has raised the rate of wages to the agriculturist, and the liberal wages paid at the mines lead to the retirement into a condition of comparative indolence of a large section of the able-bodied young men who, under better-balanced conditions, ought to continue at work for a good many years longer than they now do. The black man in Africa has been correctly likened to a child of the type which is so irresponsible in his everyday actions that he might be classed as simple-minded, though in certain ways intelligent, easy-going to a degree of being decidedly lazy or indifferent. It is generally admitted by impartial judges that the judicious combination of firmness and kindness involved in the treatment of natives by Boer methods has been more fruitful of good results than the ways adopted by our own countrymen. It is unnecessary to descend to details, but the fact is clearly reflected in the greater respect generally exhibited by natives to their Dutch than to their British masters.

The Dutchman seems to understand the native character better than the Britisher. One striking difference at the outset is that the Boer insists on the native learning the Dutch language, and he gives his orders in his own tongue, while the Britisher attempts to pick up a smattering of kitchen Kafir, and not infrequently makes himself ridiculous by reciting orders, characteristically pointed with strong language, which he does not more than half understand.

The change from the iron rule of Lobengula and his predecessors to the paralysing policy of British rule has been too sudden, and has been fraught with no little mischief to the people themselves, who are now no longer under more than a shadow of control by their paramount chiefs, and are subjected to no disciplinary influence. Their own sweet will is their only guide, and the result is about the same as it is in this country when a child's parents abrogate their authority and leave untutored nature to itself. The unwisdom of rearing spoilt, pampered, and petted children, whether black or white, is so frequently demonstrated by latter-day custom that it needs no elaborate condemnation. The higher benefits of education are lost, and the individual contentment and concurrent happiness only derivable from discipline and a fully appreciated sense of right and wrong between man and man is sacrificed. To these general disabilities may be added, in the case of the natives of Southern Rhodesia, a further grave disadvantage—in no small measure due to the supineness of the Home Government—the physical and moral degeneracy of the rising generation produced by inanition and by the uncontrollable spreading, under prevailing conditions, of a preventable disease.

There is now no possible chance of another native rising on a large scale. The memories of the sufferings during the last Matabele war have transferred the women permanently to the side of peace. Contrary to the general belief entertained of a country where a large burden of the everyday work of the community falls upon the women, in Mashonaland particularly, the women are said to control the husbands if not the household.

The first step towards the elevation of the native population must be made through an education based on discipline. The race is degenerating, not only on account of the personal freedom from the early control necessary

to guide an individual to do what is right, but also on account of the reduction in the amount of animal food they have for consumption since the cattle perished. Nothing struck me with so much astonishment as the present impotent representatives of those terrible Matabele warriors of whom we have read so much. Something in the right direction in this matter has been done recently by the Government re-introducing an allowance of animal flesh into the food of the natives working on the mines. As the live-stock of the country increases in numbers the amount allowed may with advantage be increased. The education which the native requires is not the book-learning which passes for education in this country, and which is quite unnecessary and unsuitable for the South African black, but technical instruction in everyday duties at an early age when his mind is open and receptive, and when he has not yet developed a natural tendency to loaf and grow up idle and lazy. Such a practical training is as impossible to give to boys collected in school centres in Rhodesia as it has been fully demonstrated to be in this and other civilised countries, and a system of apprenticeship ought to be resorted to by which, as a preliminary for demonstration purposes, a certain number of boys should at first be selected from every kraal before the age at which they usually hire themselves to work, and placed for three years under Government regulations and inspection with farmers who would become their instructors. There a piccaninny directed in English would soon pick up a working knowledge of the English language and learn habits of industry, an appreciation of live-stock, and a toleration, if not a love, of hand-labour, which becomes more and more distasteful to idle boys as they grow older. I found that a paramount chief, Um-tassa, had at his own initiative placed his son, Sebalu, with Mr. A. Strickland, at Inodzie, Penhalonga, under conditions identical with those I have stated, and which I had previously formulated, with the exception that, following the custom of the country, orders were given in Kafir and not in English. What a native chief decided was best for a member of his own family might well be accepted as suited to the sons of less enlightened tribesmen. A favourable opportunity will be obtained of trying the system on a large experimental basis if a considerable number of picked agriculturists are selected

and introduced to aid in settling the country. The boys who receive an early practical training would, owing to the advantages derived from work thus grown easy and familiar to them, be induced to continue at it to earn full wages, and thus be able the sooner to return and settle down in their kraals to do their share of the field labour of the family. The wholesale training of the young native boys by the only form of education which could lead to the elevation of their social condition and make them contented with their lot, would be at the same time a great economic gain to the country. At the present time the natives of Mashonaland, and by far the greatest number of the black population of Matabeleland, cultivate the soil by the hand-hoe, in spite of the fact that they own the cattle as well as the means to provide inexpensive one-furrow ploughs, by which they might at much less trouble and expense work their lands thoroughly and grow far more abundant crops. Already 1,000 ploughs are said to be employed by natives growing their own crops in Matabeleland, and all that is needed is the training of the rising generation and the exercise of patience for a few years to make the custom universal. This would liberate a considerable proportion of the muscular power of each kraal to be employed at wage-earning work in other directions, and would save the women from much of their hardest field labour, which, by custom and tradition, they share with the men under existing circumstances.

We can see in the elevation of the native and in his training to cultivate his crops by the plough drawn by the cattle he already possesses, the only hope of establishing a regular trade in the export of mealies to this country. A favourable inclusive rate of 2s. 6d. per bag of 200 lbs. has been established for carriage of mealies from Rhodesia to London, but if the enormous prices of 25s. a bag and upwards of a few years ago were not able to induce Rhodesian farmers to grow mealies in large quantities, the prices for maize now ruling in Britain are not the least likely to do so, although they are exceptionally high for Europe. Moreover, the chances are that normal prices will be touched here before very long. The Kafir could grow mealies at much less outlay than the white man, and there is no reason why a trade in Kafir-grown mealies should not develop if organised on business lines.

apart altogether from the white cultivation. A few years ago there was a considerable trade in mealies grown in the Victoria district by the Mashonas, which has practically ceased with the disappearance of the white traders who carried on the business by barter. There is no question about the superior quality of South African mealies for feeding purposes as compared with maize from either North or South America. This is amply confirmed by starch manufacturers, who say they contain more albuminoids, and are in consequence not of so much value for their purposes.

I heard of many minor cases in which trouble and great unnecessary inconvenience periodically arose to the white population, especially in certain districts, through the want of a rational method in controlling the black population, but shall restrict the indictment to one glaring instance which is doing an incalculable amount of injury to the whole country, and should receive the immediate attention of the Rhodesian Government, backed by the necessary authority from the Government at Home.

In the time of Lobengula not only was the area each kraal was permitted to cultivate defined, but the times when the work of cultivating and harvesting should begin was fixed by the paramount chief. Now, without guidance or authority, natives wander practically anywhere on unoccupied outlying land, and of course by preference into the natural, somewhat open, forest areas. Their practice is to cut the branches from the trees in full leaf, to spread them round the base of the bared trunks, and, when they are withered and thoroughly dried, to burn them, so that the lower bark of the trees is scorched and the trees killed. The mealie crop which usually follows grows luxuriantly on the ash fertilised areas, but not any better for the trees having been killed. The few surviving trees are finished off the second year by firing a pile of mealie stalks round them. After taking three crops, or probably only two on granite land, the ruthless devastators move on to another part of the bush, where also trees of considerable money value are again destroyed, and in turn their dead stumps left to fall after disfiguring the landscape for a term of years. We had evidence of the wholesale nature of the injury from a minor chief, Nyungundya, whose kraal is on the old Salisbury road between Felixburg and Victoria. Stretching

out his arms in the direction of a vast expanse of country to the west of the sandy ridge along which the road passes, he said he remembered when it was all one dense forest of great trees and full of big game (of which he specially named giraffe), but now it is a wilderness of stumps and worthless bush, having paid the penalty resulting from weak-kneed native administration. There is no reasonable ground to doubt that the wholesale destruction of large areas of native timber, mostly by natives, but also to an inexcusable degree by the mines for firewood, has much to do with the decrease in the rainfall of Rhodesia, which has been observed with ample cause for alarm during recent years. The worst feature of the position, so far as the complete destruction of trees by the natives is concerned, is that it is wholly unnecessary. All the benefits derivable from the burning of the branches could be gained if they were spread only a couple of feet from the trunk, so that the life of the tree would be spared. The branches would not spring again so quickly as to overshadow and injure the crops below within the three years the land might be cultivated; but the tree would remain to produce a new crop of branches ready to be trimmed off and burnt for manure the next time the whim of the native cultivator brought him back to his old haunts. It is admitted that the only way the natives could be persuaded to adopt the rational method proposed would be by penalising a number of them for ignoring instructions issued by the native commissioners; but in their own interests—apart from the general interests of the country—no such wanton destruction of public property should be permitted.

[The Paper was illustrated by a number of lime-light views.]

DISCUSSION.

Mr. Gordon S. D. Forbes, M.L.C., D.S.O. (Rhodesia): Mr. Wallace's extremely interesting paper must have entirely dispelled any doubts that may have existed in the minds of those present as to the prospects which Rhodesia offers from the cattle-raising point of view. It will also be welcomed by those who have been connected with that country from its earliest infancy, because Mr. Wallace thoroughly endorses the opinions which we then formed and have ever since held. Those opinions were

formed, not perhaps as the result of any special technical knowledge we possessed, but because of what we saw then and have seen since. One noticed herds of well-fed healthy cattle roaming through South Rhodesia; the rinderpest came and depleted the herds, but from the spectator's point of view the visitation only demonstrated the remarkable recuperative powers of the country. Again the East Coast fever was imported, but in spite of the fact of that disease having been overcome only a few years ago the native population to-day own over 120,000 head of cattle and 400,000 head of sheep and goats. What the white population own I do not know, but, as showing they thoroughly appreciate the necessity of importing thoroughbred stock, I may tell you that within the last ten months over £92,000 worth of imported stock has come into that country, and when you realise that the total farming community is something like 1,000 men, I think you will see that there is some energy and progress among them. Stock-breeding, however, is not the only advantage we claim for Rhodesia. The climate is unsurpassed, if not unequalled, by that of any other Colony, and the newcomer is not called upon to show those powers of endurance which have been displayed by settlers who have to fight their way in other countries. They arrive in a country where no such thing as hardship in this respect is really known. It has been suggested that a certain number of those who take farms would be isolated in such a vast territory; but the fact is there are many miles of railways, and no farmer is ever likely to be placed in such a position of isolation as some in my own country of Scotland during the winter months. It has been pointed out that the mining industry has been making very steady progress, though the number of those actually working in this industry is very small, perhaps not more than 3,000 or 4,000, but at the end of this year they will be producing gold exceeding two and a-half millions. I think the whole progress of the country to a certain extent is shown by the fact that the importation of merchandise alone in the last ten months exceeded one million pounds, while the exports exceeded two millions, and by the end of the year will be between two and a-half and three millions. The lecturer has touched upon a certain lack of enterprise—a reluctance shown by the

natives in using the best machinery for agricultural purposes—but that, as we know, is not a characteristic peculiar to Rhodesia—it also exists in this country; and I may mention that in the last twelve months £12,000 worth of agricultural machinery has come into the country, a fair proportion of which has been purchased by the native, who is willing and ready to learn to adopt methods for obtaining the best results from his work. With respect to native policy, I may say, without raising any controversial points, that I do not look upon the natives as our equals, socially or intellectually; but whether we agree with the policy of the British Government or not, I think those carrying out the native administration have the respect and trust of all sections of the community. The necessity of fencing has been recognised for a considerable period, and legislation has been passed with that object, but you cannot compel men to fence their farms if they have not the money or if there is no system of banking through which they can borrow the money, as in Australia and other places. With respect to veld fires, legislation also has been passed, and the penalties are very heavy for infringing the law. I hardly think that the native is degenerating, but if so it is not, as Mr. Wallace suggests, on account of the food. He is better fed in the mines to-day than ever before. The cattle he then herded were the property of the king, and he dare not kill for food. I will only add that those who are prepared to come to Rhodesia will receive a cordial welcome so long as they are prepared to share the responsibilities of the country. Individual effort plays no unimportant part in the progress of that country, more perhaps than in any other, and we are determined to help that particular section of Africa to arrive at the position which its resources fully justify us in believing it will ultimately attain to, so that when we are ready to join in the great unification of South Africa we believe we shall be able to enter on as favourable terms as any other State.

Major Frank Johnson: As perhaps the oldest Rhodesian in the room, I looked forward to this paper with special interest, and if it has contained nothing that is strikingly new to most of us, that is rather the misfortune of Mr. Wallace than his fault, because South Rhodesia to-day has taken its position as a settled Colony of the Empire, and with its press, its telegraph, its railways, and

its Cook's tours, its conditions and possibilities are probably better known than many other Colonies in the British Empire. With the greater part of the paper I wish cordially to associate myself, particularly with that which dwells on the great possibilities of Rhodesia as a cattle-raising country. Mr. Wallace boldly tackled the native policy in South Africa. With that part of the paper I was much impressed, because I think he is the first Englishman I have heard upon a British platform who has had the pluck to say that the methods adopted by the Boers in dealing with the natives are preferable to those adopted by the British. Personally I am thoroughly in accord with him in these views. It would be much easier for me if I could equally agree with everything he has said in his paper, but I must join issue with him when he throws cold water on the agricultural as distinguished from the pastoral possibilities of Southern Rhodesia. I do not claim to be an expert, though I have been there for over twenty years, but there are plain facts which I think do not tally with the pessimistic view he has taken. He roundly condemns the agricultural future of the country because the extent of good arable land is small in relation to the area. That is a matter of degree, and however small the ratio may be, there is a large extent of agricultural land even on the high veld. Then we are told that tropical products cannot be relied upon, because they are too expensive to work and require too much technical knowledge. I do not know where Mr. Wallace got his data from as to the cost of working fibres, because unless it be within the last few months there is no fibre plantation established in Rhodesia from which you can get reliable data; but I may say that experts who have visited Rhodesia and German East Africa have assured me that the conditions, both as to soil and climate, in Rhodesia are far ahead of the conditions under which Sisal hemp is produced payably in German East Africa. As regards tobacco, there is a great deal in what he said, but, I would ask, can you rely on the seasons in any part of the world? You do not stop fruit-growing in Kent because of one bad year. The same with tobacco. Even if you are calculating on putting tobacco on the European market, labour is not so expensive as to wipe out all profit. We are told that mealies would not pay even with a favourable inclusive rate for putting them on the

English market. One of two things—either all the farmers in Rhodesia were fools and did not see a fortune staring them in the face, or else, as is actually known, they made more money by other methods of farming. The trouble has been that you have had only two classes of farmers: the Dutch farmer, whose one object has been to simply live, and who as long as he had 6,000 acres and enough necessaries of life to keep body and soul together, was content to leave well alone; and the young Englishman, who has come out with capital and has gone on to his farm intending to cultivate the land, but found he could get rich more quickly by other means, such as transporting riding, wood contracting, etc., and so has neglected agriculture. I hold no brief for the Rhodesian Government, who, goodness knows, have had many stones thrown at them, but I notice Mr. Wallace charges them with want of control over the native population, and as a “glaring instance” cites the fact that they do not define, as Lobengula did, the times when cultivation and harvesting were to be begun and ended. That is rather hard, because when I lived with Lobengula I do not remember that marked regularity of seasons, but assuming that it was so you must remember Lobengula had what the Company had not—a large staff of well-trained witch doctors, who produced rain whenever Lobengula told them, and therefore with the rain you could fix the period for cultivation and harvest. We are greatly indebted to Mr. Wallace for what he has told us of the capabilities of Rhodesia as a cattle raising country, but young farmers who are not cattle farmers should not be put off going to Rhodesia on account of what the paper contains. I could name two men who went out from Scandinavia four years ago, one with £23 and the other with £83. One of them, for purely domestic reasons, returned, but his partner has farmed the joint land, and that one man has now some 400 acres under cultivation. He is now making money which he never dreamed of making in Scandinavia. He produced tobacco in small quantities, fruit, vegetables and mealies by sheer hard work, and raised through his profits the capital by means of which to bring under cultivation the 400 odd acres of land belonging to him.

Mr. F. J. Newton, C.M.G. (Treasurer-General, Rhodesia): It is a great pleasure to me to be able to contribute my humble meed of appreciation of Mr. Wallace's

address, the more so because I happened to see a great deal of him in the course of his travels through Matabeleland and Mashonaland, and I can bear witness to his conscientious efforts to arrive at sound conclusions. He is not only an expert by training, but by experience, having visited many countries and seen many local experts, and he is therefore in a better position than most men to judge of the capabilities of the country. We therefore receive with great pleasure the testimonial he has given Rhodesia as a country for producing cattle. While we Rhodesians accept with pleasure that statement, we respond to the challenge concerning the capabilities of Rhodesia as an agricultural country. Time alone can show who is right, but I can assure him that his remarks on that branch of the subject will not receive general endorsement when they reach the country we come from. He paid us a pleasant compliment by saying that, no matter what happens, Rhodesians always come up smiling, and sure enough the two speakers after him, true Rhodesians, came forward in that spirit and dealt fairly with the case he put and also with the case he did not put—that is, the claims of Rhodesia to be an agricultural country. I could have wished he had had something to say about our efforts at producing what we consider our staple crop—that is, mealies. I do not wish to blow the Rhodesian trumpet too loudly, but I believe the Director of Agriculture for the Transvaal is in the room, and that he will endorse the statement that we have gone ahead of the other States in producing what is commonly called pedigree mealies. As regards tobacco, I admit as yet it is not a staple product, but I feel confident its possibilities are enormous, and indeed Mr. Wallace relented a little when off the platform showing the pictures, and admitted that tobacco might have some future, but only as a by-product. I may mention a case within my own experience. A citizen of Belfast, a man of education, came out in August, 1907. He made bricks, built a house, put up two tobacco barns, and ploughed sixty acres with a span and a half of oxen, and if you will go to the Rhodesian Emporium in London to-day you will find some of the finest Virginia tobacco grown as his first effort in tobacco culture. He is going to make a substantial sum by that one year's operation. ["What was his capital?"] It would only be the oxen, two ploughs and cultivators'

wages for the year. He is going to get all that the first year, and possibly a large proportion of the labour employed in making the house and two barns. There is no doubt tobacco is easily grown and can be well grown. I mention one thing that has come to light in our own experience in Rhodesia in the last two years, and that is that the tobacco plant, instead of requiring an unfailing supply of moisture, is a drought-resisting plant. It wants a good start in the first few weeks, but Turkish and Virginian tobaccos, the latter in a less degree, can get along very well for a long time without rain. Of course they get the moisture from the summer dews. Mr. Wallace did not give us any notable panacea for our present condition. In certain passages of his address he hints at a very large body of settlers being introduced into Rhodesia. For myself, I do not mean to advocate that any man should dream of coming and settling unless he has the command of a certain amount of capital, or unless he is prepared to take off his coat and work for wages. I take it that most people who come out to settle come to acquire land and make a place and property for themselves, and they must have at least £750 to spend in that case. It wants money to buy a span of oxen, a plough, two or three cows, money to live on for a year and a half, and money to pay the "boys'" wages. It will require very good handling indeed to make the money do that, and I believe the British South Africa Company is only right in making this a *sine quâ non* for persons who propose to come out and settle. Mr. Wallace has hinted at 2,000 settlers being imported in the next five years. Well, those men must each have that amount. There is another difficulty. These 2,000 men must each have a span of oxen, which means fourteen or sixteen, and a few cows, and 20 times 2,000 means 40,000. I do not know where you are to go to get 40,000 head of cattle in the next five years to stock these settlers with, but we look with some alarm on any undue or hasty or forced importation of cattle into that country. The reason is well known. We have stock there which are increasing steadily, and do not want any set-back to the country, and such an importation must only bring risk and seriously jeopardise our staple industry. I hope that anything I have said will be accepted by Mr. Wallace in the perfectly friendly spirit in which it was intended, for we have all the same object in view, which is the good of Rhodesia.

Lieut.-Col. A. Weston Jarvis, C.M.G., M.V.O.: I was somewhat surprised to hear my friend Mr. Newton name so large a sum as £750 as the necessary capital for a settler. It is possible, I think, under certain circumstances, to find settlers who would be able to make a good living with somewhat less than that amount, and I am at present occupied in trying to work out a scheme by which we might be able to settle a large portion of the best agricultural land of Rhodesia on a much less capital than that, on condition, of course, that certain facilities could be given, which we should be ready to give, in the way of providing cattle for ploughing the land, and also cows for domestic purposes. It depends, of course, on the amount of land the settler would occupy; but the scheme I have in mind is to settle plots of land of, say, 200 or 300 acres, giving each settler the right of grazing on a common area, and provided that cattle were given to him on fairly easy terms of payment I think he could start life and do well on considerably less than £750. It would, I think, under these circumstances, be possible for a man to start with £300, or, preferably, £500. But there is no doubt he is right when he says that a man wants to see his way to providing the cost of living for the first year. Mr. Newton has naturally taken into consideration their having to purchase all the cattle they require, but if these could be provided in the first instance I think the amount might be reduced. Nobody believes, or has believed, more in the future of Rhodesia than I have. I have worked very hard at it, as has everybody connected with the country. We have been knocked down very often, and yet we have always come up smiling; but for myself, I think we have turned the corners now at any rate, and the future of Rhodesia I look upon as one which is going to be very prosperous indeed. All we want is population, and the question is how to attract it. If we could find a good scheme of settlement in some such way as I have indicated, I think we might attract a very useful population, who might make farming profitable, and they by degrees might be able to increase their holdings, and so improve the farming industry very materially in the Colony.

Capt. J. C. Jesser Coope: We have listened with keen interest to a very instructive address, which will be read with no less interest by large numbers of agriculturists.

in South Africa, to whom Mr. Wallace is well known through his valuable book on the farming industries of Cape Colony. Rhodesian farmers will appreciate the value of having their industry reviewed by so eminent an authority, and will be grateful to the British South Africa Company for having arranged his visit. It is significant that, although he only saw the country during the winter months of July and August, he is yet able to confirm the high opinion of the great pastoral prospects of the country already expressed by many other authorities. You have heard that the Rhodesian farmers have already started to grade up their herds on the lines suggested by importing thoroughbred bulls from this country. Last year I assisted at the selection of a large number of thoroughbred Shorthorn bulls from the Birmingham Show, and a few days ago I had a letter from a friend in the North asking if I could look at fifteen thoroughbred Angus cattle which were being shipped out. The results on the local herds will be carefully watched. Many of the Rhodesian cattle show distinct dairy qualities. The Mashonaland cow gives milk exceptionally rich in butter fat, and there are many cattle descended from the Holstein strain which will give a daily lactation average of from sixteen to twenty bottles throughout the period. There is no doubt there are great prospects for dairy farmers in Rhodesia. They have little difficulty in raising crops giving a high nutritive ration, enabling them economically to feed their cattle throughout the winter and maintain the milk yield at a high average, making the production of first-rate butter and cheese profitable at economic rates. Mr. Wallace has not failed to praise the great qualities and enormous quantities of our hay. He has pointed out that the local mealie is of higher nutritive value than that grown in North and South America; this, together with the fattening qualities of the native grain (nyoite), and the fact that a cattle food equal in albuminoid ratio to the finest cotton cake can be prepared from the local ground nut, will enable winter feeding of high-class stock to be carried on economically. The lecturer has referred to the cultivation of the monkey nut. Some of us believe the nut is going to be one of the regular rotation crops. There is a local demand for the nut as a ration for the mining boys, and there is practically an unlimited market in Europe at prices ranging from £13 to £15 a ton. Mr.

Wallace's remarks on the education and employment of the native will be received with sympathy by a large number of thinking men in the country. It is no doubt a question of great importance to all South African industries, but of special importance to the agricultural industry, as so many of the natives are agriculturists, and I believe a large number of the young natives would respond to agricultural education on the lines suggested with benefit to themselves and the country. I wish Mr. Wallace had said a little more on the subject of scientific education for white settlers. One of the results of the neglect of agricultural education in the past has been that South Africa has allowed a large portion of her market to be captured by over-sea agriculturists. I would like to see a number of young South Africans enter English agricultural training colleges annually, for we should thereby obtain a class of agriculturists capable of scientific research and of improving the methods of local agriculture. I wish also he had mentioned the enormous amount of agricultural products South Africa still finds it necessary to import, and the great opening this home market offers to the prospective Rhodesian farmers.

Mr. S. Simpson: I am an old student of Professor Wallace's, and am just now back from three years' work in Nyasaland, which borders North-Eastern Rhodesia, where I have been working on agricultural development. I am not going to compare Nyasaland with Rhodesia, for I have not been in Rhodesia, but the two countries are similar in many respects. Nyasaland is an agricultural country. That we have proved and are proving every day. We are growing good cotton, good coffee, and excellent tobacco, and this year the Imperial Tobacco Company of Great Britain and Ireland have opened a big factory there, and the industry is well assured. Although Mr. Wallace has dwelt chiefly on the pastoral life of Rhodesia, I have seen most excellent samples of tobacco grown there, and Rhodesia must not give up tobacco. With regard to the pastoral industry, we have cattle, and we find that treating our cattle as Rhodesians do we get excellent results by crossing Shorthorns with native cattle. Sheep are just as in Rhodesia; they do not do well with us. But pigs do well, and I think some of these countries ought to give far more attention to them. The difficulty of curing bacon and hams is easily overcome,

and consider the enormous advantage of being able to export something which sells at 4d. or 6d. per lb. instead of maize, the carriage alone of which costs a few pounds per ton. With regard to trees, everyone knows that is a burning question. We have seen the disastrous results of cutting down timber shown plainly in every part of the sub-continent, and I am sure the policy of allowing the natives to cut down trees will act badly on the future condition of Rhodesia, and that something ought to be done to stop the process and also to plant up forest areas to replace those which have been denuded. I think the natives want to be educated to know that they could have some suitable rotation of crops on the same soil without having to cut down timber over new areas. Further, I think that in every country where we have a big native population we should have some simple form of school establishment where the sons of the chiefs could be brought together and trained thoroughly in agriculture. It would have a great effect (as in the case of the Sudan) on the future of any country in which that system was adopted. As regards the future, I believe the prospects of Rhodesia are very good, and I believe the prospects of Nyasaland are very good. But we want men with capital. The great fault I find with those who advertise is that they persist in putting the limit of capital too low. If a man says to me he wants to go to Nyasaland and asks what capital he ought to have, I tell him he should have £2,000 and no less.

The Chairman (the Most Hon. the Marquess of Winchester): I think before we separate we ought to pass a vote of thanks to Professor Wallace for his interesting address. I notice he omitted to call attention to the large and increasing number of young Rhodesians who have been born and bred in the country. Our schools are now increasing in number, and the numbers attending them are also rapidly increasing. The aim of our great founder, Mr. Cecil Rhodes, was that in that country there should be raised a population British in sympathy and in instinct, and full of that vigour which Colonial life adds to that usually found in the British race. I think the pioneers of Rhodesia have carried out Mr. Rhodes's desire to the letter. You have heard how they encountered the rinderpest, the East Coast fever, the locusts, and other troubles. But there is such vitality

in the race that they have succeeded in founding agriculture now upon a thoroughly sound footing. Mr. Wallace says our mistake was that we did not pay sufficient attention to the development of agriculture in the first instance : but in the first instance we had not railways, and therefore it was quite impossible to take the agriculturists by the hand and set them down where there was no market. The Company, therefore, fostered the mining industry as far as possible in order to create a market for the agriculturist. That has now been successfully done, and we look forward to being able by careful selection to induce a further accession of population, having with them a certain amount of capital, because until the capital has made the country it is quite impossible for the landless man to do any good. It is no good for a man to go and pit his work against that of the black. The farmer could not afford to employ white labour, because he can get black labour so much cheaper. We have had mining experts who have gone out to that country who have not patted us altogether on the back for the way we have carried out our mining adventures. Mr. Wallace has not patted everybody on the back with regard to agricultural methods, but I think there is a great deal of sound common sense in what he says, and he has put the stamp of his great and well-known capacity on certain salient points. Through his knowledge of other countries he has been able to point out to the farmers of Rhodesia how they can improve their present methods. There is one point on which he laid the greatest possible stress, and that is the question of fencing. It will be possible, I hope, shortly, when we have a larger population, to establish land banks and co-operative farming. It is that which has made Australia the country it is, and though I hope we shall not take from Australia many of its present difficult and trying problems, yet we ought to try to take the best. I hope we shall avoid the difficulties which Australia has fallen into in its system of federation, and that our Constitution, when formed, will be one which will tend to the universal prosperity of South Africa. The British South Africa Company, in their desire to promote the welfare of the settlers, have recently appointed as their agricultural expert a man who is well known to Professor Wallace, and who has had considerable experience in the Cape—I mean Dr. Nobbs. We

hope to be able to associate with him a staff thoroughly versed in agricultural methods, and to assist him in impressing on the settlers the necessity of applying scientific methods. Science in agriculture is a matter which you may say we have not paid sufficient attention to in this country, but if it is not paid sufficient attention to in Rhodesia, I can assure you it will not be for want of opportunities which will be given to settlers of seeing the best possible methods employed. There is one thing I should like Professor Wallace to tell us. If he were a young man himself with a limited amount of capital, and wanted to settle in a Colony, what Colony would he go to? If he would tell us he would sooner go to Rhodesia than any other Colony, I think we may safely accept it that Rhodesia is a country which anybody may safely put their money on.

Professor Wallace: I thank you most cordially for the hearty way in which you have received this vote of thanks. My paper has received a certain amount of criticism, but that I expected, and I am only pleased that it has not been worse. I have not said anything against agriculture in Rhodesia. I think the prospects of agriculture are hopeful in a great many directions, but I said it was not by agriculture Rhodesia was going to be developed, but by stock, and the men who do that can concurrently practise a great deal of agriculture. It is no use men going there with £300 or £400 of capital. A man ought to have horny hands, a good stiff back, and at least £1,000 in his pocket, and he has got to be the best workman on his farm. Rhodesia is not to be settled by soft-hearted and soft-handed people. With regard to the appointment of Dr. Nobbs, I am glad to think the Chartered Company has already taken some of my advice, and I hope they are going to take more. In Dr. Nobbs they have secured one of the best practical and scientific experts in this country or in South Africa as Director of the Agricultural Department, and I have not the slightest doubt that if they follow up that appointment, as Lord Winchester suggested, and support him with properly trained experts, you will find that the agriculture of Rhodesia will soon take a very different position from that it occupies at the present time.

A vote of thanks was given to the Marquess of Winchester for presiding, and the proceedings then terminated.

A letter had been received from Mr. Henry Samuel regretting his inability to attend. He wrote that the agricultural future of South Africa had always been prominent in his thoughts, and his experience of thirty years spent in these countries had impressed upon him the fact that the future of South Africa rested, not so much in her mineral wealth—great though that is—as upon her vast agricultural resources.

"We must all look forward," he said, "to the day when South Africa develops her resources so as to make herself a self-supporting country, with a surplus of agricultural products to export, instead of being, as at present, a land which, in spite of its fertile soil, depends on overseas supplies for all but the barest necessities.

"Rhodesia at the moment appears to be the only independent and British possession in South Africa which is working on thoroughly Imperialistic lines." The various Governments (Mr. Samuel added) should now combine their energies and devote themselves to a great scheme for the development of agriculture and for the encouragement of settlers of a desirable class. They must provide means for the assistance of new-comers, not only with advice and instruction, but also with such aid as would enable those who are willing to work, that they may establish themselves and thus become a valuable asset to the country, notwithstanding the possible smallness of their original money capital.

Wheat under Irrigation.

By J. CAMERON.

In the pursuit of wheat growing in Rhodesia there are certain matters that claim particular notice, owing to the peculiar circumstances of the country. In damp and wet seasons it is well nigh impossible to find a variety of wheat that will resist rust. At the same time certain varieties are to be found whose resisting powers are such that the plants hold out long enough to mature the grain. In some cases a quick maturing habit pushes the crop ahead so fast that it escapes the attack. Besides rust resisting character, a wheat, to be entirely successful, should

possess good milling qualities—must be capable of being made into good flour—neither excessively starchy nor too glutenous. When only a few varieties, having the same or nearly similar properties, are grown throughout the country, the grain has a much greater commercial value than if an endless variety of small parcels are supplied to the miller, having different characteristics and no uniform standard.

By adopting varieties of wheat to start with that in the greatest degree combine rust-resisting and milling qualities, the Rhodesian farmer will be in a better position to furnish such marketable article than if the production of the grain were allowed to run in separate and desultory channels.

Gluyas Wheat, in Australia and Cape Colony, has proved to possess a grain highly commended by millers, and at the same time to be rust-escaping if not rust-proof. It requires rather thicker sowing than most other wheats, as, like all quickgrowing varieties, it does not stool-out well. About 80 lbs. per acre should therefore be sown. Rietti wheat comes originally from a district of that name in Italy. It is most carefully selected, and kept pure in variety by an association formed by growers in Italy for that special purpose. Rietti wheat has been known in Cape Colony for several years, having been first introduced casually. It has, however, now proved remarkably well adapted for Colonial conditions, and fresh seed procured from the original source has been shown to give even better results; this variety tillers well, but is slow growing, especially at first. It has, however, not done well far inland.

Cape barley, Chevalier barley, Beardless barley, and barley wheat are all cereals specially recommended as excellent green forage. For the grain product, if grown with that object, Chevalier barley yields a fine quality of grain, both for feeding and malting purposes. Barley wheat is already known in several parts of Rhodesia. Last year a fine crop of this variety was grown by Mr. C. C. Macarthur, at Hillside, near Salisbury. It was sown in April, and gave a heavy yield on a damp, loamy soil, without any irrigation at all.

Rye has not yet received much attention in Rhodesia, but as a forage crop it deserves recognition and a trial. It furnishes green food or hay equal to, if not even

superior to, oat forage. It grows on all soils that are used here for wheat, oats or barley, while on light sandy or gravelly soils rye may be expected to yield a heavier crop than any of them. In cutting rye for forage, it should be harvested while quite green—as soon as the grain is in the milky stage—for if allowed to begin to ripen the stalks get hard and woody. It should be sown at the rate of 80 lbs. per acre.

In certain spots it is possible to grow the different varieties of barley, and probably rye, without irrigation, as a winter crop, but generally to secure full yields more or less irrigation is requisite. It happens that the soils that could produce a crop without irrigation are nearly always too wet to work in March and April, at the time when the seed should be sown. By the time the land is dry enough for being worked the season is too late. But in all cases of winter cropping, whether wheat or other cereal, the land should be ploughed and the seed put in at the earliest possible moment after the summer rains are over. April will be about the best time. It is better for crop growing under irrigation that the plants at the very early stages of growth should receive as little irrigation water as possible, but that they should be encouraged to take deep root by following up the damp which is still retained in the soil. In order to retain the soil moisture as much as possible when the land is being ploughed, the harrowing should follow immediately after the plough. This will keep the soil closed up, preventing rapid evaporation. Since a smooth even surface is indispensable, it may often be necessary to run a cultivator through after the first harrowing, in order to level the surface, thereafter harrowing again. Judgment must be exercised in preparing the seed bed, but more seed is lost through the soil being too rough than too fine. After the seed is sown it should be harrowed in sufficiently. If a drill machine is used for sowing the seed, the land should receive all the cultivating and harrowing before, and not after sowing. As soon as the plant has got a good hold, and stands an inch or two high, the harrows may be run over the land. This will prevent caking and form a mulch to conserve the moisture. The crop will then make a good stand and take deep root. Unless actual signs of failing are shown no further irrigation water should be given until the coldest part of the winter

is passed. When natural growth is again starting, a good soaking should be given to the crop, which will then carry on until coming into ear, after which, in most cases, only one further supply of water will be necessary.

More harm is done to the crop through an excess of water than what follows from the supply being short. When land is waterlogged, unhealthiness of the crop ensues, and disease is given every opportunity.

Practically there is only one method of irrigation now in general use throughout Rhodesia—that of flooding from field laterals. It is the easiest and least expensive method, only requiring labour carefully applied in carrying it out. The great essential to the equal spread of water is having the land thoroughly levelled on the surface at the outset. The amount which will soak in and be held is also increased by having the land ploughed across the flow of water. Thus the “ribs” at the bottom of the furrow will retain, instead of draining off the water percolating downwards.

Mashonaland Farmers and Co-operation.

Following up the preliminary organisation formed last year, which showed the advantages of combination in dealing with the maize crop, the Mashonaland farmers have adopted a new scheme, whereby the whole control and management of this season's crop is retained in their own hands instead of dealing through an agent.

The committee appointed to draw up a scheme submitted their recommendations to the last meeting of the Farmers' Association. After discussion the following rules and regulations constituting the organisation were unanimously approved and adopted:—

THE FARMERS' CO-OPERATIVE SOCIETY, SALISBURY.

RULES AND REGULATIONS.

1. The name of the Society shall be “The Farmers' Co-operative Society.”
2. The office of the Society shall be in Salisbury.

Objects.

3. The objects of the Society are:—

- (a) To dispose of the maize crops of the members in the most profitable manner.
- (b) To dispose of any other farm produce that the members might choose to send in to the Society.
- (c) Generally to promote the interests of the Society either in selling or buying.

Capital.

4. The capital of the Company shall be contributed by the members in the following manner:—

- (1) Each member shall contribute 1s. per bag on each bag of 203 lbs. of maize sent in to the Society for disposal, which sum of 1s. per bag shall be and become payable immediately on the delivery of the whole or any portion of the member's crop, and shall be deductible from the first money due to the member.
- (2) In the second and following years each member shall contribute 1s. per bag on every bag of maize sent in to the Co-operative Society for disposal in excess of the quantity already paid on.
- (3) Further capital will be raised by means of loans or overdrafts from the Society's bankers on security of the produce delivered to the Society.

Financial Year.

5. The financial year of the Society should be reckoned from the 1st day of April to the 31st day of March in each year.

*Membership.*6. *Bona-fide* farmers and traders of European descent may become members by application to the Committee.

7. Every member must at the time of entrance sign his name in the Members' Book, and by his signature bind himself to the existing regulations and any additional regulations or alterations of regulations which may be lawfully made from time to time without any notice from the Society being required.

Resignations.

8. A member may resign at the end of a financial year, provided he has given the Secretary three months' prior notice, in writing. The acknowledgment of such notice of resignation must be made in writing by the Secretary with as little delay as possible.

9. Any member so resigning shall be entitled to withdraw from the funds of the Society any sums of money contributed by him as and for capital in terms of clause 4 hereof.

10. A member may be expelled from the Society by a majority of two-thirds of the members voting at a special general meeting called for the purpose.

11. Resigned or expelled members have no claim on the reserve fund created by the Society.

Committee.

12. The Committee shall consist of seven members, to be elected for a period of twelve months, and such district members as it may become necessary from time to time to appoint. At each annual general meeting all the members of the Committee shall retire. Such retiring members of the Committee shall be eligible for re-election. Any vacancies shall be filled by the remaining members of the Committee until a general meeting can be called for the purpose.

13. The Committee shall act in the name of the Society, and they shall exercise, within the limits of these regulations, the same power as if they had been determined at a general meeting. The Committee shall account and report for all their transactions at each general meeting and special general meeting when called upon so to do.

14. The Committee shall meet as often as is necessary, and their position shall be honorary, but travelling and out of pocket expenses shall be refunded when travelling on the business of the Society.

15. Any member of the Society shall have the right to attend any meeting of the Committee in order to bring forward any special matter or grievance.

16. The Committee shall engage a sufficient staff to carry on the work of the Society, fix their salaries and determine the work to be carried out by the employés. They have also the right of suspension and dismissal.

17. The Committee shall open a banking account, into which all moneys received shall be deposited as soon as possible after receipt. All cheques must be signed by one member of the Committee and countersigned by the Secretary.

General Meetings.

18. The annual general meeting of the members shall be held within six weeks after the close of the Society's financial year.

19. All questions submitted to a meeting shall be decided by a majority of votes, except where otherwise provided by these regulations.

20. No alteration of the present regulations shall be made except at a meeting specially called for the purpose, at which at least one third of the members registered on the books of the Society shall be present.

21. All meetings shall be convened by notice posted to members at their address fourteen days at least before the day appointed for the meeting

Special General Meetings.

22. A special general meeting can be called at any time upon a requisition being sent to the Committee signed by at least 10 members of the Society.

Regulations Regarding Supply of Produce.

23. Every member shall bind himself to dispose of the whole of his crop of maize through the Society, with the exception of what he requires for his own farming and domestic purposes.

24. The members must inform the Committee, in writing, of the quantity of their harvest immediately after reaping.

25. If the crop of a member be damaged or destroyed through circumstances beyond his control, so that he cannot fulfil his engagements towards the Society, he will be relieved of his obligations in respect of such crop if he instantly advises the Committee to that effect.

26. If any member fails to fulfil his engagements towards the Society without the reason provided for in the foregoing clause, he shall be responsible for any loss and damage that the Society might sustain through his action.

Regulations of Payment to Members.

27. Members may receive an advance up to 5s. per bag on the quantity of maize delivered by them to the Society. Such advance to bear interest at the bank rate and to be repayable month by month as the member's maize is disposed of, half the value of the sales being devoted to the repayment of the advance.

28. As soon as a member shall have delivered his crop or any portion thereof to the Society, he shall begin immediately to share in the amounts received by the Society on account of sales made, in proportion to the quantity so delivered by him, at a basis price to be fixed by the Committee.

29. At the end of each financial year the average nett price per bag obtained by the Society over the whole season shall be ascertained, which average nett price per bag each member shall be entitled to receive.

Regulations Regarding Sales of Produce.

30. All sales of produce shall be on the basis of market price.

Interest on Capital.

31. Members shall be entitled to receive interest at the Society's bank rate on capital subscribed by them in terms of Clause 4 hereof.

Liability of Members.

32. The liability of each member shall be limited to the extent of the value of his undisposed quantity of maize in the hands of the Society.

Growers of Early Mealies.

33. The growers of early mealies will receive special consideration if possible.

Dissolution of the Society.

34. The Society may be dissolved by a resolution of a special general meeting called for the purpose passed by two-thirds of the members of the Society, such members being personally present.

Simple Rules for the Treatment of Malaria for the use of Farmers and Settlers.

By A. M. FLEMING, C.M.G., M.B., F.R.C.S. (Edin.),
D.P.H. (Camb.), Medical Director to the Administration of Southern Rhodesia, Salisbury.

There is only one drug which can be considered a specific in malarial fever, and that is *Quinine*. Many other drugs have been tried, but not one equals quinine as a cure for the disease.

Malaria, if properly treated at the onset, is essentially a non-fatal disease, death occurring, as a rule, only in non-treated or imperfectly treated cases. To withhold quinine in malaria, or only to administer it in occasional doses at irregular intervals, is little short of criminal.

For settlers and farmers, the best form in which to administer it is the tabloid form of the Bisulphate, this salt being much more readily soluble, and therefore more easily and more quickly absorbed, than the ordinary sulphate of quinine. These tabloids should not be sugar-coated.

GENERAL RULES FOR THE TREATMENT OF AN ORDINARY ATTACK OF MALARIAL FEVER.

I. IN ADULTS.

(a) The cold or shivering stage.

Usually, at the outset of an attack of malarial fever, the patient complains of feeling cold and chilly, and may have a sudden shivering attack. He should be at once put to bed between blankets and kept as warm as possible, with extra blankets and hot bottles if necessary. The bowels should be opened with a gentle purgative, preferably half an ounce (that is half of the usual one ounce packets), or more of Epsom's salts dissolved in half a tumbler of water.

(b) The Hot Stage.

The initial cold stage is very shortly followed by what is called the hot stage of malaria. The patient complains of feeling hot and dry; the eyeballs and the back ache, and the temperature rises.

Antipyretics, that is, drugs which reduce the temperature, such as phenactin, antipyrin, and antifebrin, should, as a rule, be avoided; they are rarely required and often dangerous.

Should, however, the temperature rise to 104 or 105 degrees, and the headache and general feeling of illness be very severe, the patient may be given five grains of phenactin in tabloid form, accompanied with a drink of hot milk; this, whilst reducing the temperature and relieving the head and body pains, assists the onset of the third or sweating stage of the attack.

During the hot stage the thirst is severe, and the patient may be given as much drink as he likes in the form of milk and soda, weak tea, or soda water flavoured with fresh lemon or lime juice.

Vomiting at this stage is often marked and troublesome, but does not as a rule persist after the temperature begins to fall. If very distressing it can often be relieved by administering large quantities (a big breakfast cup at a time) of warm fluids, hot water, or weak tea. These help to wash out the stomach and dilute the irritating contents. The administering of plenty of fluids also helps the onset of the sweating stage.

(c) *The Sweating Stage.*

After a variable interval, generally from two to three hours, the patient begins to feel easier; the head gets lighter, the pains abate, and he breaks into a profuse perspiration. This is the third or sweating stage. The temperature now falls, and the malarial paroxysm is over for the time being, to return, however, if untreated, at the end of twenty-four hours or longer, according to the type of fever.

When the patient begins to perspire is the signal for the commencement of the quinine treatment. If quinine is given at the very onset, that is, in the cold stage, it is too late then for it to arrest the attack, and it is apt to add to the general discomfort and headache. It must not be forgotten, however, that quinine is the only real cure for malaria, and, if the hot stage is unduly prolonged, and the patient shows no sign of beginning to perspire, or his temperature to fall, the sweating stage must not be waited for too long, but quinine administered in full doses without further delay.

As regards the method of giving the drug: Ten grains should be given as the first dose, and after that five grains every six hours, day and night, for about a week, or longer if the temperature has not returned to the normal.

A good rule is that quinine should be given for two full days in the doses mentioned, after the temperature has returned to the normal.

To ascertain this, the temperature should be taken twice daily, night and morning. Normal temperature is 98.4 degrees, and is marked on the thermometer with a little arrow. Every farmer and farmer's wife should know how to take temperatures and read a thermometer, and this can be taught him or her in five minutes by their medical attendant, or by any chemist.

Quinine is best given in solution, as it is more readily absorbed in that form. If the five grain tabloids of the bisulphate of quinine are crushed up, they will be found to dissolve fairly easily in cold water, and quite easily if the water is warmed.

Where the digestion is much upset, and the gastric juices much diminished, quinine tabloids, especially if they are at all old, are apt to be passed unchanged through the bowel. This is frequently the fate of the more common tabloid of sulphate of quinine, especially if it is sugar-coated. Should, however, the distaste of quinine be so great, or should the solution set up vomiting, then the tabloids must be given as they are, and their solution in the stomach can be helped by following them up with a drink of fresh lemon or lime-juice and water.

If quinine is given systematically in the manner described, it will generally be found that the return of the fit or paroxysm is more or less arrested.

The patient's temperature may or may not rise the following day, but it will not be so high as the first time, and in nine cases out of ten will return to the normal by the third or fourth day, if not earlier.

During the sweating stage the patient should be frequently dried and his clothing changed, and all dangers of chill avoided. It is very advisable that the patient should remain in bed for two full days after the temperature has become normal both in the morning and evening.

The diet during the attack should be chiefly fluid, and during convalescence, light and easily digested. Spiced and greasy foods should be avoided.

After Treatment.

As before stated, quinine is to be given in the doses mentioned for the two full days after all fever has disappeared. As there is always a varying degree of anæmia following an attack of malaria, and the patient is generally languid and listless, a tonic should be taken after this for at least a fortnight.

Tabloids of Iron and Arsenic or Bland's pills with arsenic are both suitable tonics, and convenient to keep. The dose is three tabloids in the day, one to be taken after each meal, that is, after breakfast, dinner and supper.

In order to avoid recurrence of the fever, and also, as far as possible, to check further infection, it is necessary to take quinine for some time afterwards in preventative doses. The best method to adopt is to take 15 grains, divided up into three doses, once a week, preferably on Sunday, as this is a non-working day. This should be kept up for at least six weeks after the last attack of fever. That is, every Sunday 5 grains of quinine should be taken three times in the day.

If this precaution is rigidly adhered to, it will be found that, if further attacks of fever are not absolutely prevented, they, at any rate, will be much less severe in character.

2. CHILDREN.

The treatment of the first and second stages is the same, except that antipyretics, such as antipyrin, phenactin, and antifebrin, must not be administered to children. The bowels must be opened at the start with a mild purgative, such as a dose of castor oil or Gregory's Mixture. The doses of quinine are as follows: For a child under one year, start with one grain and follow with half a grain every six hours, and continue for the same period as an adult. For children over one year, the dose is approximately one grain for every year of life up to four years, and the initial dose for children under ten should not exceed five grains. From four to ten the dose for children is four grains.

Children are found to stand quinine well, and to react to it even more readily than the adults.

An easy way of giving the drug to the very young is to crush it up and give in milk in a teaspoon. The bitter is so intense that it is difficult as a rule to get children

to take quinine, and much tact and patience is required. It must not be forgotten that children are liable to develop coma and convulsions and other types of pernicious malaria if the initial attack is not vigorously treated with quinine.

The after treatment should be on the same lines as in the case of adults. A useful tonic is what is known in all households as Parrish's Food. This should be given in water three times a day. The dose for a child under one year is 10 drops. From one to three years old, one half a teaspoonful; from three to five years and upwards give one teaspoonful. The quinine after treatment should be given once a week the same as in adults, the dose being in accordance with the age of the child.

3. PREGNANT WOMEN.

It is known that quinine in large doses may cause miscarriage or abortion, though it is doubtful if this is as common as is supposed. At any rate full doses of quinine should not be given to a pregnant woman.

Women in this condition should be given five grains for the original dose, and three grains every six hours afterwards. The length of time the treatment should be kept up is the same as in other cases. The quinine after treatment should consist of three grains three times a day once a week. Continued fever is much more likely to bring on miscarriage in a pregnant woman than quinine judiciously administered.

In writing these simple rules on the treatment of malaria for the guidance of farmers and settlers in Rhodesia, it is not my intention that these should supersede medical advice where available. "A little knowledge is a dangerous thing," and there is always the danger that, in giving information of this sort to the public, they are thereby encouraged to avoid the expense of sending for a doctor till they have had a try themselves at curing the disease, and more harm than good is done in consequence. I cannot too strongly impress on my readers that no two persons are alike, and temperaments and cases never agree in all points, and where a doctor is available he should always be called in without delay.

These notes are intended for those on lonely, isolated farms, who may be far distant from the nearest medical man, and perhaps temporarily cut off from him by unfordable rivers, etc., and are meant as a guide to them, so that they can carry out the best treatment available at the time, and till such time as skilled medical assistance can be obtained.

I can say nothing here about the more pernicious forms of malaria, or about its complications and sequelæ; these can only be treated, each case as it occurs, by trained medical men, and if the instructions in these notes are religiously carried out, there is little chance of their ever appearing.

Onion Growing.

By the EDITOR.

By steady persistency and experiment the successful growth of onions as an item of Rhodesian husbandry may now be fairly recognised.

The experimental stage of a few plots yielding samples only has now been succeeded by cultivation in bulk on a profitable scale. A considerable number of farmers are now growing from one to three acres or more each of onions.

The accompanying illustration shows the kind of crop which was grown last year by Messrs. Reid and Tait on the farm Ingleborough, in the Mazoe district.

The soil is a black vegetable loam, medium sandy, is free working, and has an open subsoil. It is under irrigation, since it must be understood that onions can only be grown on a commercial scale as a winter crop. Also the soil must be of a similar nature to that mentioned—be free from binding, fertile, and in a high state of cultivation.

The method Messrs. Reid and Tait pursued was as follows:—

The seed was grown in Natal, a variety obtained through Messrs. Meikle Bros., which gives good results in that Colony.

It was sown in carefully prepared beds in April. Watering with cans twice a day was closely carried out until July, when the young onions, about the size of the point of one's little finger, were ready for planting out.



Photo by]

Onions being reaped at Ingleborough, Mazoe.

[A. Reid.

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The land was thoroughly prepared and laid out for irrigation in beds of convenient width for flooding. The ridge and furrow system where tried failed in giving equal results with flooding on the flat.

On the smooth and level surface in the fine tilth lines were taken off about 14 inches apart, on which a small furrow, less than three inches deep, was made with a hoe.

In this furrow the young onions were planted, and packed firm at just sufficient depth, giving them a good hold, the bulb being rather less than two inches from the surface, the distance between the plants being about 4 or 5 inches. No earthing up around the plants was given, the ground being left on the flat.

The soil was kept stirred and all weeds kept down during the whole period of growth. Irrigation water was given about twice a week throughout.

Towards the end of October the onions were becoming fit for reaping, and early in November the whole crop was ready for disposal. The average size was between two and three to the lb.

One acre yielded 75 bags, and they fetched 50s. per bag in Salisbury, amounting to £187 10s. for a single acre.

The seed cost 30s. per lb., and the boys' labour about £10. About 1 lb. of seed, when it comes up well, is sufficient for planting out an acre.

Cutworms at Bulawayo.

By E. C. CHUBB, Acting Curator, Rhodesia Museum.

A caterpillar belonging to the class generally spoken of as cutworms, has swarmed in Bulawayo and neighbourhood these last two summers. During the month of December, 1907, these caterpillars were to be seen in incredible numbers all over the town.

They ate off most of the grass, and I believe were responsible for a considerable amount of damage to the meales of farmers and natives near Bulawayo. Although by no means as numerous this season in the town itself, I am informed that the crops and grass belonging to some farmers a little distance out have suffered severely from this pest during the last few months.

This particular cutworm is about an inch long, and is green, with several longitudinal stripes along its back varying from greyish to black.

Examples taken are kept under observation, developed into a *Noctuid* moth—*Laphygma exempta*. They appear to live above ground for a month or six weeks as caterpillars, and then enter the ground to pupate. After a period of two or three weeks, or possibly longer, they emerge as full grown moths.

Although up to the present this cutworm has not occurred in such numbers elsewhere, as far as I know, it is just possible that, given a particularly favourable season, it may increase and spread over large areas of the country, and for this reason farmers should be prepared to deal with it as soon as it makes an appearance among their mealies.

REMEDIAL MEASURES.

These should be the same as are usually employed with other cutworms, viz., the distribution about the lands of bran or chopped green stuff poisoned with some compound of arsenic, and sugar or treacle added to make the bait attractive. For a detailed account of the method of preparation and employment of this poisoned bait the reader is directed to the "Rhodesian Agricultural Journal" for December, 1908, p. 193.

Butter Making.

In our correspondence columns will be found a letter requesting a few hints on butter making as distinct from an article on the subject. We herewith offer the following concise and simple rules issued by the Royal Agricultural Society of England and sold at their demonstrations and competitions held in the Show-ground:—

SIMPLE RULES FOR BUTTER MAKING.

Prepare Churn, Butter Worker, Wooden Hands and Sieve as follows:—

1. Rinse with cold water.
2. Scald with boiling water.
3. Rub thoroughly with salt.
4. Rinse with cold water.

ALWAYS USE A CORRECT THERMOMETER.

The Cream when put into the Churn, and the Churn should both be at a Temperature of 52 to 57 degrees in summer, and 56 to 60 degrees in winter.

The temperature of the atmosphere should decide at which of these figures churning should take place. The warmer the day the lower should be the temperature of the cream and the churn and *vice versa*. The churn should never be more than half full. Churn at number of revolutions suggested by maker of churn. If none are given churn at 40 to 45 revolutions per minute. Always churn slowly at first.

Ventilate the churn freely and frequently during churning, until no air rushes out when the vent is opened. If the cream "goes to sleep" after it has been churned for 25 to 30 minutes, stop churning and wash down the lid and sides of the churn with a small quantity of water at a temperature of from 75 to 80 degrees Fahr. The butter will usually come with a few more revolutions of the churn.

Stop churning immediately the butter comes. This can be ascertained by the sound; or by inspection.

Directly the butter comes, the temperature of the butter and buttermilk in the churn should be taken, in order that the cold water and brine mentioned in the three following paragraphs may be lower in temperature than the butter and buttermilk, otherwise in the washing and brining processes, the butter will not be kept in good grain, but may get into a lump. Butter when churning is properly done, should be like grains of mustard seed.

Pour in a small quantity of cold water (one pint water to two quarts cream) to harden the grains and give a few more turns to the churn gently. Draw off the buttermilk, giving plenty of time for draining. Use a straining cloth placed over a hair sieve so as to prevent any loss, and wash the butter in the churn with plenty of cold water; then draw off the water, and repeat the process 3 or 4 times until the water comes off quite clear.

TO BRINE BUTTER,

make a strong brine, 1 to 3 lbs. of salt to 1 gallon of water. Place straining cloth over mouth of churn, pour in brine, put lid on churn, turn sharply 3 or 4 times, and

then drain off the brine. When a Delaiteuse or centrifugal drying machine is used the butter should be taken out of the churn, and put in the bag provided for the purpose, and dried in the machine. Where the water is worked out of the butter on the butter worker only, the butter should be lifted out of the churn into a sieve, turned out on the worker, and allowed to drain for half an hour (that is if the dairy is cool) before being worked.

In both cases, working out the superfluous moisture and not working water into the butter is the object to be attained.

TO DRY SALT BUTTER,

place butter on worker, let it drain 10 to 15 minutes, then work gently till all the butter comes together. Place it on the scales and weigh; then weigh salt, for slight salting $\frac{1}{4}$ oz., medium $\frac{1}{2}$ oz., heavy salting $\frac{3}{4}$ oz. to the lb. of butter. Roll butter out on worker and carefully sprinkle salt over the surface, a little at a time; roll up and repeat until all the salt is used.

N.B.—Never touch the butter with your hands.

Importation of Stock.

SOME METHODS ADOPTED BY OTHER COUNTRIES.

By ALFRED HICKMAN, Egerton, Kent, England.

When some of the diseases which assail live stock imported into Rhodesia are got under by the energetic efforts of those who have taken the matter in hand, it is more than probable that a large trade may grow up in imported live stock from the Old Country. It may therefore interest readers to know the conditions ruling this trade in the many foreign countries and Colonies which are such big customers to the "Stud Farm of the World."

In almost all cases, live stock of any sort has to be accompanied by a certificate signed by the Local Veterinary Authority of the district in which the stock has been kept, stating that they are free from infectious diseases

and that no such diseases have existed in the district for a certain period, generally six or twelve months. Horses and ponies are not kept in quarantine on landing, all other farm live stock is, but the periods vary considerably, nearly every country having different ideas as to what constitutes a safe period. One country, the U.S.A. only imposes 15 days quarantine on sheep, whilst another imposes as long a term as 90 days; this latter seems absurdly excessive as no evil results have yet occurred through the imposition of only 15 days, although the country enforcing it is the largest buyer of pedigree sheep that Great Britain has. The Government of the U.S.A. imposes a quarantine of 30 days on cattle.

There are two great drawbacks to an extensive import trade in the majority of cases, one being the inordinate length of the time that the stock must be in quarantine, and the other the high cost of freightage to those countries served by Steamship Companies which have formed a Combine.

There are two countries which stand out from the others in their efforts to improve their livestock. Pre-eminent among these is Brazil, which refunds to all importers of pedigree stock, half the expenses incurred from the time of purchase till they reach their owner's estate. This is a very liberal and far sighted policy on the part of Brazil, which will no doubt have great results in the future. This regulation has only been in force about 18 months, but the demand for live stock so far has certainly been disappointing. The other country is the U.S.A. who keep a Veterinary Surgeon in England, to apply the tuberculin test to all cattle bought for export to that country. The Government pay the whole of his expenses, so that his certificate of freedom from tuberculosis costs neither the vendor nor the purchaser a penny piece.

Things are very different in the Argentine; importers have their cattle tested here as a precaution, but their Government will not accept these certificates and all the cattle are tested by them in their quarantine stations just after landing, when they are likely to be feverish, or as much out of condition as they have ever been in their lives, the consequence being that cattle are often condemned there, that have passed in England. During the last 3 years, amongst others, one bull, that cost 3,000 guineas and another that cost 500 guineas, have failed to pass; they were

slaughtered, and a post-mortem showed them to be perfectly sound. For any country importing live-stock there is no doubt that the policy adopted by the U.S.A. is the best possible for all concerned.

The Government of every country likely to have a pastoral future, should do all that lies in its power to improve the live stock of that country and should impose the fewest and least irksome restrictions consistent with maintaining the health of their stock.

Hints for Poultry Keepers in Rhodesia.

By "MINORCA."

As many rumours are current just now of considerable losses of poultry through sickness, it appears to me that a few words on the management of birds will not be out of place.

First of all a large number of people are under the impression that there is some disease peculiar to this country which is practically unknown in other parts of the world, but the sooner this fallacy is exploded the better. The fact is the diseases which have appeared locally so far are nothing to what have to be contended with in other parts of the globe. What is known generally as "fowl sickness," is nothing more or less than a form of liver disease, brought on by errors in feeding or indigestion.

Liver disease and roup—with later developments to diphtheric roup—are practically the only diseases which have yet appeared locally to any extent. Such diseases as contagious enteritis and cholera, that carry off large numbers of birds in other parts of the world, are happily almost unknown here. Given reasonable care and attention there is no country in the world more suitable for poultry raising than Southern Rhodesia, and the causes of failure are invariably due to carelessness in some way or other.

Two poultry-keepers came to see me last week complaining of losses, which from the description given, leaves little doubt were attributable to liver disease. I enquired what the birds had been fed on, and in both cases found crushed mealies figured largely in the diet.

Furthermore, neither of these gentlemen had ever considered the necessity of providing their birds with artificial grit. Either of these errors are sufficient in themselves to bring on liver disease. Mealies, whether whole or crushed, are very unsuitable as a diet for fowls in this country by reason of their heating properties. In a hot climate the aim of the poultry-keeper should be to keep the blood of his stock as cool as possible, and anything calculated to heat the blood should be avoided, except in the coldest weather, and even then fed very sparingly, the last thing at night. Mealies can be fed with comparative safety in the cold climate of Great Britain, but are very liable to result disastrously if fed to any extent in Rhodesia.

Many corn merchants in this country make a practice of preparing mixed grain for poultry, but the indiscriminate mixing of many kinds of grain does not necessarily provide a well-balanced ration, and for those poultry-keepers who have not the inclination to study the "balance" of the rations I should strongly recommend in place of this mixed corn, a feed of different varieties on different days. If the mixed corn is fed every day the birds get no change, and a variety of diet is highly desirable. It costs no more to buy the several varieties of grain separately than it does mixed, and it is obviously far better to feed a different variety every day in the week, than seven different varieties every day, and the birds show a keen appreciation of the change. Another point not sufficiently considered in this country is the provision of an adequate supply of green food for the winter months when the birds are unable to find it for themselves. Plenty of green food is absolutely necessary to keep the bowels in good order, and is best fed in the heat of the day, as it has a cooling tendency. Personally I have enclosed about a quarter of an acre with a wire netting fence. Inside this enclosure I have patches of lucerne, red and white clover, lettuce, etc., and in the winter months, when everything is burnt off, the birds are driven into the enclosure for about twenty minutes in the middle of the day, and allowed to pick what they want. These patches are well watered once or twice a week, and the daily cropping keeps them sprouting with the exception of the lettuce, which it is necessary to replant as occasion requires. In addition to this I periodically mix a little Epsom salts with their morning mash.

With regard to providing artificial grit, the average poultry-keeper does not realise the necessity for this course, and is under the impression that the birds can pick up sufficient for their requirements. I have even met poultry-keepers in Salisbury who were unaware that grit was necessary for a fowl. Now, to understand why grit is absolutely necessary, it must be explained, for the benefit of those who have not studied the subject, what the action of the grit really is. Everyone has seen the gizzard of a fowl, and will have observed that it is a muscular organ, corrugated on the inside. When grit is swallowed it passes into the gizzard and is therein retained for the purpose of grinding the grain, under the muscular action of the gizzard, before being assimilated into the system. It will, therefore, be obvious that the harder and sharper the grit, the better will the operation be performed. The grit, by constant wear, is also assimilated into the system and provides the bird with certain necessary mineral salts.

A fowl kept without grit is in exactly the same position as a man without teeth, and indigestion is inevitable. Now indigestion is one of the primary causes of liver disease in poultry. Furthermore, it will be obvious that if the food swallowed by a fowl is not properly digested, a proportion of the egg-forming constituents contained therein will be wasted; it follows, therefore, that a supply of good hard grit is conducive to increased egg production. Sand is useless as a substitute; it is neither large enough nor hard enough. The proper sized grit for a full-grown fowl is about the size of a pea, and angular and sharp as possible.

I have noticed some people hammering up broken china for the use of the birds; this is a highly dangerous proceeding, as a lot of glazed china contains dangerous chemicals, and is very likely to do the birds serious injury. There is plenty of hard white quartz and flint to be found, which can easily be pounded up to a suitable size.

There is one thing we have to contend with in this country which poultry-keepers are not troubled with to the same extent at home, i.e., sand fleas, and considerable care and watchfulness is necessary to keep down these pests. If a large flock of birds is once allowed to become infested it will be no easy matter to get rid of these fleas. Thorough cleanliness is therefore absolutely essential. My houses are all swept out clean daily, and once a week

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Photo by]

Dalbergia Sissoo. At Experimental Nursery, Salisbury.

[C. E. F. Allen.

they are thoroughly watered with strong sheep dip early in the morning, to allow them to dry well before the birds go to roost at night; when thoroughly dry the floors are thickly sprinkled with lime. Each house is provided with a dust bath, composed of a mixture of dust, ashes, and lime, with a little Keating's powder and flowers of sulphur added, the whole placed in a box large enough for a bird to dust itself in.

Even with these precautions I occasionally find a bird with a few fleas firmly attached to the eyelids, or under the throat. There is nothing better for removing these than a little vaseline with paraffin and sulphur rubbed into the parts affected.

A periodical inspection of all birds is necessary to prevent vermin getting well established before being noticed. This is best done in the evening after the birds have gone to roost, when a tour can be made with a lantern and the birds examined individually.

If the simple rules suggested in this paper are attended to systematically it will be found that not so much labour is involved as appears on the face of it. I contend that with poultry and eggs at the prices they are, there is a sufficiently large margin of profit attached to poultry keeping to pay for any extra care and attention, and I am certain the observance of these rules will do away with a large percentage of losses through sickness, assuming that the birds are rationally housed.

In conclusion, I should like to impress upon the farming fraternity the fact that for the amount of capital expended and labour involved, there are very few branches of farming which prove more remunerative than poultry-keeping, and considering the number of eggs imported into Southern Rhodesia annually, there is little chance of the supply exceeding the demand.

Dalbergia Sissoo.

By C. E. F. ALLEN.

At the Experimental Nursery, Salisbury, this tree has made excellent growth. Trees planted four years ago are now from 10 to 15 feet high. The long drought of last year had no bad effect on the growth. White ants

do not appear to molest it. It thrives on a rich soil moderately well drained, but it will probably be found to thrive equally well in sandy districts. Close planting, 4 ft. x 4 ft., is recommended. The accompanying illustration will give some idea of the fine growth made by this tree in Rhodesia.

In its home in the Himalayas the Sissoo develops into a large tree, and extensive plantations have been made with it in India.

The wood is described as durable, with white sap-wood, brown heart-wood, close and even grained, seasons well, and is hard. It is used for railway sleepers, cart-wheels, boat building and furniture of all descriptions.

A Word on Weeds.

By JAMES WADDELL, of Pentland, Mazoe.

“One year’s seeding is seven years weeding.”
—(Old Saw.)

It is not generally realised how important is the relation weeds bear to the farming industry. The farmer’s life may almost be described as a constant war with them, and his success or failure depends largely on the result of these campaigns. Nine-tenths of all the farm tools and implements are used mainly as weapons in that great warfare. Ploughs, harrows, cultivators, badsas—incidentally they may be used for cultivation, but barring the ploughing of stubble, how much cultivating would be done if weeds did not render it necessary? Nature seems to abhor a vacant piece of fertile land. Even the dumps from prospecting shafts, miles from any cultivated land, soon bear luxuriant crops of black jacks. It is not surprising, therefore, that as soon as new land becomes mellow enough for farm crops, weeds also spring up.

Taking into account the difficulties of the present-day farmers, armed as they are with all that science and mechanical art can give them, we can understand more fully the grim struggle constantly taking place between primitive man and the forces of nature. Scratch the soil

and weeds will grow. Nature will provide the seed. If only requires the labour of man to uproot the grass when soon other growths speedily cover the spot.

To some extent the Mashona solves the weed problem by burning his fields. A patch properly burned is said to bear three crops without becoming unduly infested with weeds. After the third crop, if weeds are becoming obtrusive, and if there is more bush land available the owner may consider it good policy to abandon the old field and set about preparing a new one. When we find that a large amount of labour is thus undertaken, solely with the object of avoiding weeds, it becomes obvious that thorns and thistles are of the gravest significance; and that it is only by the sweat of the brow that food can be wrested from the ground.

Farmers sometimes wish to know when it is going to be possible to take things easy, and have a good time. To this query there can only be one answer—when wear and tear ceases and weeds no longer grow. The old dictum: “He that by the plough would thrive, himself must either hold or drive,” may be modified a little when applied to Rhodesia, in so far as actual driving is concerned. But the great truth holds as rigidly here as elsewhere. Constant vigilance, close supervision of labour, and attention to small matters, these the farmer must bring to bear in his business at all times.

As already indicated nearly all cultivation has for its object the prevention or destruction of weeds; or, to put it differently, the fact that weeds are growing, or will grow, is always a powerful incentive to cultivate. They thus render cultivation necessary, and cultivation increases the crop, but woe betide the man that fails to clear the weeds away.

It can also be said in favour of weeds, that to a certain extent they prevent the exhaustion of soils. I need not go fully into this matter, but farming experience could bear me out in the statement that immense quantities of vegetable matter in the shape of weeds are ploughed in or otherwise returned to the soil year by year. This, coupled with the fact that farm land is not losing its fertility in spite of continuous grain cropping, is significant.

When weeds have been so far reduced in numbers and size that not a pound of mealies has been lost through their presence, and when not a blank is observable in the

rows of mealies in harvest time, perfection has been pretty nearly attained. But as that ideal state could only be reached by drastic cutting down of acreage, and might prove unpayable in practice, it is hardly likely that farmers will set their standards so high.

Having indicated much that is harmful in weeds, in order to conform to the usual commendable practice of journal writers, I ought now to unfold a scheme for their eradication. With much regret, however, I acknowledge myself unable to do anything of the kind. No doubt every farmer in the country is doing all he possibly can to keep his lands clean, and that the most up-to-date methods and implements are being used.

Science has done a good deal for agriculture, but Science has its limitations. In the matter of weed-eradication she has given us not very much, and in the matter of cutworms nothing at all. Yet weeds and cutworms diminish the mealie output probably quite 50 per cent. every season. Again, while we all maintain our climate to be the best in the world, it is an unfortunate fact that the wettest periods usually occur when cultivation is most necessary, and cultivation and pouring rains are an "ill-matched pair."

Since Nature thus hinders the farmer in his efforts, and Science aids him but feebly, the one solution of the difficulty is doubtless—labour.

But, unfortunately, during the period that weeds might be most easily destroyed the supply of labour is at its lowest ebb. Happily, indications are not wanting that this condition of things is about to cease.

Notes.

ABERDEEN-ANGUS AND ITS CROSSES.

It may be of interest to those who have recently imported sires of this breed into Rhodesia to know that the outstanding feature of the past fat stock show season in Great Britain was the remarkable success of animals of the Aberdeen-Angus breed, and crosses of that breed. In no year has the round of the shows brought out more strongly the superiority of Aberdeen-Angus blood in beef

production than in the season just closed, during the course of which the breed and its crosses achieved a record which is altogether unique in the history of cattle breeding.

At the Birmingham Fat Stock Show an analysis of the cross-bred classes revealed the marked superiority in numbers and in quality of the Aberdeen-Angus-Short-horn cross. It was remarkable that the whole of the prizes went to animals having Aberdeen-Angus blood in their veins.

At the London Smithfield Show, the championship for the best animal in the show was awarded to an Aberdeen-Angus heifer, the reserve being by an Aberdeen-Angus sire.

The popularity of the cross showing Aberdeen-Angus lines of breeding was shown by the fact that of the forty entries, thirty represented Shorthorn and Aberdeen-Angus lines of breeding, and five combined Aberdeen-Angus and Devon blood. It will thus be seen that Aberdeen-Angus blood was the most largely represented, cropping up in thirty-six out of the forty animals, and appearing in combination with three different breeds.—("Banffshire Journal.")

On Mr. L. Black's farm, Stapleford, the Tobacco crop this year more than maintains the high grade of former years. The Turkish tobacco in particular shows a leaf having fine colour and texture, while the yield is far above the average; a field of ten acres is giving a return approaching 1,000 lbs. per acre of most beautiful quality.

Virginian tobacco occupies a field of about 14 acres, the return per acre being also highly satisfactory both in quantity and quality.

Cutworms on this farm did a very great amount of damage to the young plants, both in the seed beds and when planted out, the acreage being thereby reduced below the breadth of land that was prepared.

Apart from cutworms the tobacco crop this year has had a very healthy growth, no disease or other injury affecting the proper ripening of the leaf.

The Turkish tobacco grown on this farm is utilised solely for the manufacture of Stapleford cigarettes, and when this season's crop is matured the cigarettes therefrom will doubtless promote into further favour Rhodesian-grown and manufactured cigarettes.

On the farm Homefield, Mr. Butchart has grown 10 or 12 acres of Virginian tobacco, which has also yielded a magnificent crop.

Mr. Butchart has erected a large flue curing barn, in which he has already commenced curing the leaf, the tobacco harvest this year being quite a month earlier than usual.

It is unfortunate that so many farmers throughout the country gave up growing tobacco this season, since in every case where it has been planted the yield and quality has been above the average.

The prize list of the 11th Annual Show, held by the Rhodesian Agricultural and Horticultural Society has now been issued. The Show is to be held within the Society's grounds in Salisbury on June 27th and 28th.

There are 377 Classes of Exhibits for which prizes are offered, of which 129 are classes for farm live stock.

A Challenge Cup, value 50 guineas, and also Gold Medal, is presented by the Society for the best bull in the showyard (Cup to be held for one year). There are besides 10 Silver Cups presented by donors for special prizes in the Cattle section.

Two Silver Cups are presented by donors for the Horse section; two Silver Cups in the Sheep section; one Silver Cup and Special Prize in the Poultry section; three Silver Cups and Special Prize in the Dairy section; Silver Cup and Special Prize in the Produce section, and Special Prize which also includes the Tobacco section.

Silver Medals are awarded in the classes for Implements, Dairy Appliances and Farm and Garden Seeds.

On account of the absence of stock diseases in the country, and the large number of well-bred animals imported during recent years, coupled with the excellent grass season and the fine condition of stock, there promises to be a great increase in the entries for the 1909 Show.

In all other sections it is reasonable to expect that a marked increase will be manifested, reflecting the general advancement which has been conspicuously made during the past season.

All entries must be in the hands of the Secretary, Mr. W. H. Williamson, Box 288, Salisbury, not later than June 14th.

N.B.—In the Sheep section the conditions of entry, stating that, “exhibits must have been in the possession of exhibitor at least three months before the date of the Show,” has been deleted.

Arrangements are being made with the Railway Authorities for the usual Reduced Rates for passengers, and for the conveyance of exhibits to and from the Show.

The Bulawayo Agricultural Society have issued the Prize List for the forthcoming Show, to be held at Bulawayo on the 16th and 17th June.

Prizes are offered among 380 classes, 83 of which are for farm live stock. Special prizes will be awarded, comprising the fourfooted, and the Poultry and Produce sections, the highest aggregate of the whole to be taken.

A new and interesting feature in the Cattle section is the Rhodesian Breeders' Sub-section, which is introduced for the purpose of showing the effects of “grading.”

Classes are provided for cross bred Shorthorn, Hereford, Devon, Aberdeen-Angus and Friesland heifers, sired by a pure-bred bull of any of these breeds. The breed of the dam is immaterial, but must be stated on the entry form.

The Produce sections include a comprehensive variety of all the different locally-grown Rhodesian Products embracing cereals and root crops, cotton and tobacco, fruit and vegetables.

Implements, machinery and vehicles are an important section.

Competitions cover a wide range, and are especially attractive.

The Bulawayo Show for 1909 apparently will prove a still further advance over the highly creditable shows held previously.

All entries should be in the hands of the Secretary, Mr. E. L. Loosley, Box 500, Bulawayo, not later than Tuesday, June 8th.

Arrangements are being made with the Railway Authorities for the usual Reduced Rates for passengers, and for the conveyance of exhibits to and from the Show. A Special Excursion Train is to be arranged for with the Cape and Rhodesia Railways, to run to Bulawayo.

Publications obtained at the Agricultural Department, Salisbury:—

“Tree Culture in Southern Rhodesia.” By P. B. S. Wrey, A.M.I.C.E. Price 9d.

“Farm Science.” Issued by the Harvester Co., of America. Price 3d.

A complete file of “The Rhodesian Agricultural Journal” since its commencement; particulars regarding sale of which may be obtained from the Editor.

Copies of “Money in Lucerne” may be obtained from the Agricultural Department, Salisbury, at the price of 1s. each; remittance to accompany order.

Tobacco Plantations Co.'s Estates, Hunyani.

By the EDITOR.

The past season has proved highly favourable for growing good tobacco on all the farms comprising the Estates.

On Warwickshire and Sublime, about 80 acres of Virginian tobacco have been grown, producing a crop averaging about 600 lbs. per acre. The quality this year is also excellent, the rains coming so evenly and uniformly distributed causing a continuous and unchecked growth of the plants. The quality of the Virginian leaf this year is considered the finest hitherto produced.

The tobacco was planted out chiefly in December, partly by machine and partly by hand labour, at the distance of three feet between the rows and two feet between the plants. After planting out, Cape Government

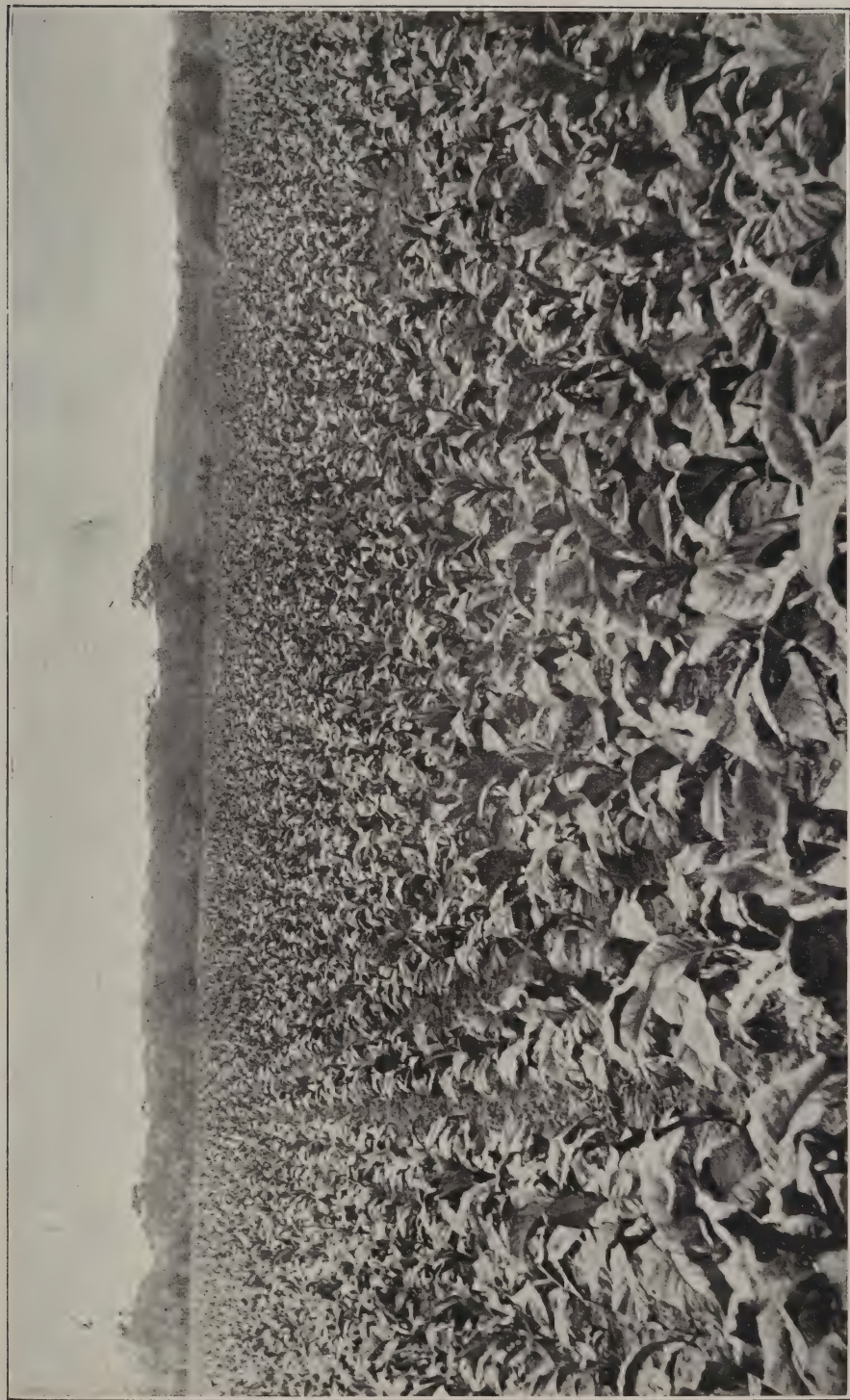


Photo by]

Field of Tobacco, Tobacco Plantations Company's Farm, Sublime.

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[E. H. South.

Tobacco on Tobacco Plantations Company's Farm, Sublime.

Photo by]

guano was applied to the land at the rate of 200 lbs. per acre. This manure was first tried the previous year, and it has now proved the most successful among all the different forms of manure that have been put under trial in increasing the yield together with maintaining the fineness of leaf.

Cultivation between the rows was assiduously performed throughout the whole of the growing period. One field of 52 acres shows a magnificent crop, in straight rows, the ground loose on the surface and scarcely a weed to be seen.

On a field of 20 acres on Sublime cutworms made their appearance in vast numbers, necessitating repeated re-planting, while only about one half the plants have survived. Cutworms have been the most serious pest this year, no other insect or blight having appeared doing damage, and the crop is being reaped in the very best condition.

The reaping season has been commenced this year six weeks earlier than usual. Flue curing is now in full swing, and carried on without break in two large barns, where the keenest watchfulness is bestowed on the process both night and day.

On the farm Kent, about 150 acres were planted by hand labour, the varieties being Hestor and Goldfinder. Cutworms on this farm were even more destructive than at Sublime. On some fields re-planting was done five times. Altogether about 50 acres have been lost through this pest, besides 50 acres more land that had been prepared and had to be left alone for want of plants.

The extra work involved in fighting cutworms can be gathered when it is understood that the whole 150 acres were on an average planted twice. Since 6,600 plants are required for one acre planted once, the planting out of 150 acres twice required no less than two millions of plants to be raised in beds and planted out.

About 130 boys were employed under the supervision of two white men.

The crop on about 100 acres of this farm is of most excellent quality, and the yield is rather more per acre than on the other farms.

At Warwickshire the leaf is manufactured as it matures into several different smoking and cigarette mixtures

which are gradually gaining a name as a first-class production, from a Rhodesian industry wholly carried out within the country, even the tins being made in Salisbury.

On a part of Kent farm 60 acres of maize were planted with pedigree seed obtained from the Agricultural Department. The crop has grown magnificently, and promises a very large yield per acre.

As no other variety of maize is on the farm, and no maize growing within miles, a very pure and uncrossed sample should result, affording a good supply of seed.

The methodical way in which the work on this Estate is carried on, and the success which has attended the growing, curing and manufacture of tobacco, reflects the very highest credit on Mr. South, the manager, and on the staff belonging to the establishment.

Rhodesian Agricultural Union.

NOTICE TO FARMERS.

All members of Farmers' Associations throughout Rhodesia requiring native farm labourers are requested to fill in the accompanying Form, and to return it to me by post without delay.

His Honour the Administrator has arranged with the Governor of Nyasaland for the collection and forwarding of a large number of natives (now being engaged specially for farm work) from Nyasaland.

Arrangements have also been completed for the collection, forwarding and distribution of natives wishing to work on farms, from North-Eastern Rhodesia and North-Western Rhodesia.

The terms are as follows:—

NYASALAND FARM LABOURERS.—Twelve months' service at wages of 10s. for six months and 12s. 6d. for balance of term of service.

NORTH-EASTERN RHODESIAN FARM LABOURERS.—Twelve months' service at wages of 10s. for six months and 12s. 6d. for balance of term of service.

NORTH-WESTERN RHODESIAN FARM LABOURERS.—Nine months' service (minimum) at wages of: Adults, 10s. for first three months, 12s. 6d. for second three months, 15s.



Photo by |

Flue Curing Barn, Tobacco Plantations Company's Farm, Sublime.

[E. H. South,

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for balance of term of service; young boys, 5s. for first three months, 7s. 6d. for second three months, 10s. for balance of term of service.

Other terms and conditions will be as prescribed by the Government—approximately similar to last year's conditions.

Native quarters for all northern natives will be inspected and approved by Government before delivery of natives to farmers. This regulation has been made by Government in the interests of farmers, as well as in the interests of natives—to ensure, as far as is possible, the good health of the labourers, and a certain and continuous supply of farm labour from the north for the future. Farmers will, therefore, specially note this most definite requirement, and provide at once warm weather-proof huts, in number sufficient to accommodate all the labour required, without overcrowding.

The cost to farmers will be:—

NYASALAND LABOURERS.—Delivered to farmers at Hartley or Salisbury, including cost of return journey to Nyasaland at end of period of twelve months' service, £1 10s. each labourer.

NORTH-EASTERN RHODESIAN LABOURERS.—Delivered to farmers at Hartley or Salisbury, including cost of return journey home at end of period of twelve months' service, £1 10s. each labourer, plus cost of blankets and jersey advanced to boy, repaid by farmer at end of six months' service. Cost of delivery by rail or messenger at other points will be additional, if required by farmer.

NORTH-WESTERN RHODESIAN LABOURERS.—Delivered to farmers at Bulawayo, through the Rhodesian Native Labour Bureau: *Ex* Kalomo, £1 18s. 6d. each labourer, plus Union charge 2s. 6d., £2 1s. *Ex* Livingstone, £1 15s. 6d. each labourer, plus Union charge 2s. 6d., £1 18s. The cost of blanket and jersey (total 5s.) advanced to natives in North-Western Rhodesia to be refunded by the farmer.

The above will be the total cost to the farmer, if delivery is taken at Bulawayo on arrival of boys, and includes rail fares from Kalomo and Livingstone to Bulawayo, and return rail fares from Bulawayo to Kalomo and Livingstone at expiration of period of service.

Should the farmer wish natives delivered by rail or messenger in outside districts of Matabeleland, he must pay the extra cost.

Should a lower scale of rail fares be obtained—which is probable—the difference will be refunded to farmers.

The charges as above must be paid to the Rhodesian Agricultural Union or their authorised agents before delivery of labourers to farmers.

A deposit of 10s. for each labourer applied for to be made with application and the balance on or before delivery.

Farmers must advise where the delivery of natives is desired.

The first gang of Nyasa natives will arrive at Hartley or Salisbury about the end of April. Small numbers of N.E. Rhodesia and N.W. Rhodesia natives are arriving earlier.

Yours faithfully,

J. S. LOOSLEY,, Secretary,
Rhodesian Agricultural Union.

Weather Bureau.

AGRICULTURAL DEPARTMENT.

Summary of Rainfall for the months dated September 1st, 1908, to February 28th, 1909, at twenty-one Stations in Southern Rhodesia:—

Name of Station.	January.	February.	Total for six months.
MASHONALAND—			
Chishawasha	11·12	8·51	38·68
Enkeldoorn	8·62	4·59	24·14
Gadzema (Giant Mine)	11·24	7·62	29·93
Hartley	12·68	7·32	31·31
Helvetia (S. Melsetter)	16·45	18·11	51·49
Inyanga	12·35	7·89	28·81
Marandellas	10·15	5·35	24·51
Mount Darwin	8·51	8·06	33·37
Penhalonga (Umtali)	14·45	11·61	39·21
Sinoia	9·13	4·43	28·76
Salisbury	8·54	6·16	34·73
Victoria	7·71	4·13	22·45
MATABELELAND—			
Bulawayo	12·23	2·79	24·21
Filabusi	10·16	4·51	23·45
Fort Rixon	5·67	1·26	15·64
Gwelo... ..	7·07	4·72	24·27
Hope Fountain	14·39	2·49	25·20
Matopo Park... ..	9·85	2·73	17·96
Nyamandhlovu	9·81	1·90	22·09
Tegwani	10·27	2·18	25·53
Victoria Falls	9·37	4·02	24·71

REMARKS.

The recorded rains of six months for the twenty-one Stations here published are, for the Mashonaland Stations, almost equal to the normal yearly rainfall.

Helvetia, S. Melssetter, records the greatest amount of rain for the period. During January and February rain was registered at this Station every day, which for a consecutive period constitutes a record.

The southern part of the country, however, suffers with Matabeleland in being rather under the average, notwithstanding that the January rains were abnormally heavy.

It has of course to be reckoned that more or less rain is still likely to come, and if so the figures at the end of the season may be above normal.

At the Observatory, Bulawayo, the total of 12'23 inches during the month of January is the highest reached since 1896 at this Station.

At Hope Fountain the figures recorded are still higher for the same month, viz., 14'39 inches. Since 1898 at this Station the instance that comes nearest these figures is in January, 1900, when 11'39 inches were recorded.

Exceptionally heavy rains have been reported falling throughout South Africa since December. At Johannesburg the downpour has been unusually heavy.

(Sgd.) C. E. F. ALLEN,

Officer in Charge Weather Bureau.

Farm and Garden Calendar.

This month must be taken advantage of to the utmost in sowing wheat and winter forage crops.

Breaking up new land should be pursued at this season in order to get as much as possible turned over before drought sets in making the land too hard. Close and repeated harrowing should follow immediately after ploughing in order to close up the soil and prevent undue loss of moisture.

Fire breaks should be ploughed about 12 feet wide in certain lines calculated to arrest the progress of fires

through the grazing lands on the farm. Ploughing fire breaks is in most cases preferable to taking the risk of burning fire lines at a later period of the season.

The harvesting of the maize crop will be started on most farms during this month. It is at the beginning of harvest that the best selection of maize cobs for seed can be obtained. By personally examining the standing crop a farmer in passing along the rows can select the individual cobs that best conform to the standard he has in his mind.

Uniformity in ripening should be looked for and also equality in the height at which the cob springs from the stalk. Cobs that grow high up on the stalk are longer in ripening than those lower down. Cobs that grow low down near the base of the stalk ripen earliest. Hence when both are mixed, the seed carries with it a tendency to unevenness in the ripening of the next season's crop. Thus cobs should be selected that are found growing at a medium height, on thick strong stalks, and as nearly the same relative distance from the base of the stalk as can be judged.

About 12 cobs plant an acre, so it cannot be considered an undue labour to collect the requisite number for planting even a large farm, including a liberal margin for subsequent closer inspection and probable rejection.

The cobs should be hung up to get thoroughly dry and afterwards put in bags and hung up with wires to the rafters in such a way that vermin may not touch them. The shelling of seed maize should be done by hand, the tips and butts being rejected, more particularly for machine planting.

Selecting the best cobs from the crib before passing through the sheller is only a partial method of selecting seed.

The work of harvesting the crop is conducted under various methods, harvesting by machines being hardly yet undertaken except in a few instances. A common method is to take four rows, each row being taken by a boy who husks each cob and twists it off,—throwing it on to a heap formed between the two middle rows, comprising all the cobs within a convenient distance—when further heaps are made up in the same way. Afterwards the heaps of cobs are put into bags and carried by waggon to the crib where they remain until ready for shelling.

Cribs should in all cases be raised at least 18 in. above the ground, supported on strong beams resting on stout uprights. Native timber only is required. Such a maize crib is far preferable to a merely levelled piece of ground, whereon much wastage occurs through mixing with sand and other rubbish.

LIVE STOCK.

The pastures being still good, all stock will get into the very best condition during this month.

It is about this season when stock breeders should consider the advisability of segregating the bulls from the cows and heifers composing the herd. In a general way, calves born before the new year have a better chance of coming through the winter in good condition than those born afterwards. If the bulls remain with the cows longer than April the calves will be coming from January onwards. It is better policy to let a cow miss one season in order that the best calving time should be under control for the next.

MAY.

During the first part of this month, wheat and forage crops under irrigation may yet be sown in damp loams that may have been too wet for being worked earlier.

The harvesting of the maize crop will occupy the whole of the month and should be pursued as rapidly as possible with all the available labour. The lands should be gone through frequently in advance of the reapers and all cobs removed from the stalks that have fallen down, thus saving them from being destroyed by white ants.

LIVE STOCK.

At this season the water supply for stock should be looked to, that cattle are not drinking continuously from muddy and stagnant pools that are now gradually drying up. A supply of fresh clean water for stock is indispensable, and should be obtained by seeking it under the most available means.

On most farms the pastures will still be tolerably good, and little feeding will yet be necessary for grown animals. Cattle under two years and also calves should be looked after and if showing signs of falling off should be given a few hours among the mealie stalks to begin with.

It will perhaps come to be found that the most economical method of utilising the mealie stalks will be by cutting and stacking them and afterwards dealing them out to the stock in a regulated supply, either shredded or long. However when eaten on the ground, some attention ought to be paid to the manner of consumption that the herd of cattle may not roam over entire fields wasting and tramping down the greater part, while picking out only the best. As far as possible cattle at first should be given only limited portions of the field, thereby consuming more fully as they go along.

SHEEP.

This is a suitable month for putting tups among the breeding ewes as the lambs will then begin coming in October. The exact period should be chosen suitable for the veld in the district, but generally May is early enough that the ewes on lambing may have sufficient pasture to keep them in milk.

Potatoes will be ready for lifting this month when they should be taken up and dried a little in the air, and afterwards stored in boxes or bags in a cool shed until disposed of. Plenty of air space should be left between the bags or boxes.

The practice of leaving them in the ground through the winter months has the disadvantage that the insect pests such as the potato tuber moth, gain a lodgment inside the tuber in greater numbers and cause a far greater loss than when the crop is removed.

JUNE.

Shelling the maize crop will be the chief work during this month. Farmers should endeavour to furnish as good a grade of maize as possible, and all badly matured and deformed cobs should be picked out and shelled by themselves for feeding purposes on the farm. A good sample of maize is an object to be striven for as doing credit to Rhodesian agriculture.

LIVE STOCK.

It is during this and the following months that the care of live stock needs particular supervision and attention.

As the nights begin to get cold, shelter is required that cattle may not lose condition rapidly. It is better to begin with feeding and shelter early that condition may be maintained and kept up rather than let cattle begin falling away into a state from which it is difficult for them to recover.

No sowing or planting is done during this month since growth has ceased to be active. It is the time of realization of the past season's products.

Agricultural shows being all held during this month farmers will have a busy time in selecting and preparing exhibits and giving their personal attendance thereat.

June is the best season for cutting native wood for farm purposes, since it is the season when the sap has ceased to flow.

Correspondence.

TO THE EDITOR, "AGRICULTURAL JOURNAL."

Salisbury, 24th February, 1909.

DEAR SIR,—

I wonder if I may venture to make a few suggestions for an article in your "Journal"?

There are a great number of women living on farms in this country to whom farm life is quite a new experience—women who know practically nothing of the work which falls to their lot, and who, with the best intentions in the world, make the most pitiful mistakes. I refer in particular to the making of bread and the preparations necessary to make butter keep, so that when a scarcity of milk happens on a farm it will not be necessary to buy butter.

Could you possibly in one of your numbers, when space permits, start a correspondence dealing with these matters:—

Bread: (1) The making of yeast. (2) How to know when the yeast is fit for use. (3) How to make bread.

Butter: (1) How long must cream be kept? (2) How to salt butter. (Ingredients and correct quantities to each pound of butter.)

I might add that I have read heaps of articles on both these subjects. What I particularly want is other folks' experience in this country where the same conditions prevail.—Thanking you in anticipation, I am, etc.,

Yours faithfully,

A FARMER'S WIFE.

[In reply to our correspondent's request, an article dealing with butter will be found on another page. Comment from this with local experience is invited. Will some reader kindly advise on the bread question, which is somewhat beyond the ken of this Office:—Ed.]

TO THE EDITOR, "AGRICULTURAL JOURNAL."

Lone Cow Estate, Ayrshire,
February 23rd, 1909.

SIR,—

Could any of the subscribers of the "Journal" who may have planted saltbush be able to inform me as to the advisability of planting some, and whether it might possibly become a substitute for a salt-lick?

I am, etc.,

R.B.

[Saltbushes (*Atriplex semibaccata*, *A. halimoides* and others) grow well and are very useful as a saline feed for stock on land too brack or alkaline to allow ordinary vegetation, grasses and so on, to flourish. On such bare spots it is sufficient to sow the seed in well-hoed patches, whence, if protected during the first season, they will spread rapidly, as the salt bushes seed abundantly. But it is no use sowing saltbush on ordinary land, where there are no signs of alkalinity. Such ground is frequent in the south, especially in the Karoo and in Bechuanaland, but rare in the settled parts of Rhodesia. In order to avoid difficulties that arise in growing directly from seed, it might be advisable to sow the saltbush seed in beds or boxes, and afterwards plant out. It will be necessary to protect it from hares, etc., during the first year.—Ed.]

TO THE EDITOR, "AGRICULTURAL JOURNAL."

Mount Shannon,
Salisbury, Rhodesia.

DEAR SIR,—

Permit me to correct an error in your "Editorial Notes" in the current number of your "Journal."

The two bulls imported by me from England were not one a South Devon and one a Red Lincoln, but both are Red Lincoln Shorthorns I got from Mr. John Evans, at Burton, near Lincoln.

May I add, for the encouragement of others, that both have successfully got through their attack of redwater.

I am, etc.,

GERALD FITZGIBBON.

WHEAT UNIRRIGATED.

TO THE EDITOR, "AGRICULTURAL JOURNAL."

Hillingdon Farm, Selukwe,
January 22nd, 1909.

SIR,—

In September last we sent Mr. Ross Townsend a couple of ears of wheat from a small patch at the end of last season, grown without irrigation or a drop of rain, which we had tried as an experiment.

At his suggestion we are sending a short account of cultivation and growth.

The soil is a dark sandy loam, with a clayey, decomposed granite sub-soil, which holds a fairly liberal supply of moisture. This land was first broken up in 1905, and had grown two crops of mealies and one of potatoes. The potatoes were planted in September, 1907, and dug in January, 1908. The land was ploughed in March and well harrowed down. Through a delay in getting the seed, and thinking we might get rain, the grain was not sown until the 27th of April. It was sown broadcast and well harrowed in, and not touched again.

The stand was very thin, but what did start stood out well, as many as twenty-four ears of corn being found on one stool. It ripened uniformly, and was reaped in September.

Although the return we got was small, and barely covered the cost of growing, yet we think it possible, by paying more attention to getting the soil into the best condition, to grow wheat to some profit. Say, growing a crop of early potatoes on old rice lands that have been well worked, the potatoes to be well manured with kraal manure, and lifted in January. The land to be deeply ploughed in February, and well harrowed and rolled, and sowing of course as early as possible. Drilling would be preferable to broadcasting, since the seed would be at a more uniform depth. It should be put in at three inches deep. A set of light harrows should be run over as soon as the stand is well established, to keep down weeds and keep a nice mulch.

We are enclosing a photograph of the different varieties, by which you will see the crop was very much mixed.

We intend growing two acres on similar land as the above, from selected seed, and will drill in about the first week in March.

We are, etc.,

H. & W. J. LONG.

LUCERNE AT INYANGA.

TO THE EDITOR, "AGRICULTURAL JOURNAL."

Inyanga, March 13th, 1909.

DEAR SIR,—

In the last "Journal" I was interested in reading the articles on lucerne-growing, and I now send you some notes giving my experience here.

I have three lots of one acre each in separate fields. One lot is just two years sown, and it is keeping a stable of ten horses going, the lucerne being cut and given as green feed. I apply fowl manure to this lot, saving it every day until a couple of bags are filled, when it is taken and spread between the rows with good effects on the plot.

The second lot was sown on a river flat consisting of a sandy loam soil which was first heavily manured with stable manure. It was sown on October 7th, and was cut for the first time on February 16th, and is now doing well.

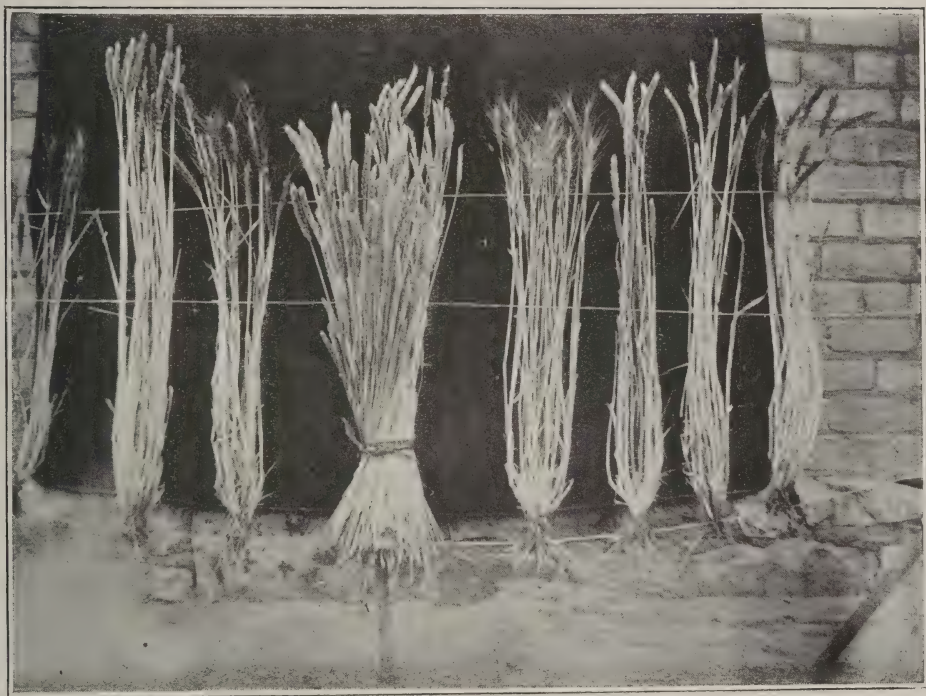


Photo by]

[H. & W. J. Long.

Wheat Stools and Sheaf grown without irrigation as a winter crop
at Hillingden, Selukwe.

ZIMMERY
OF THE
UNIVERSITY OF ILLINOIS.

The third lot was sown on a poor piece of ground on December 18th. The land received a good dressing of lime and was then ploughed. The lucerne is looking well, and was cut for the first time on March 1st.

In my opinion the important points in growing lucerne are: That it should be sown in drills, and during the first wet season it should be constantly cultivated to keep down weeds, etc. After the first year's growth, when it is strong enough, the harrows should be run over it frequently during the rainy season.

I am, etc.,

FRED. E. WIENHOLT.

Epitome of Cattle Inspectors' Returns.

DECEMBER, 1908.

SALISBURY.

With the exception of one case of Rabies, there have been no reports of disease in the district.

BULAWAYO.

No outbreaks of contagious disease have been reported for the month, and the cattle at the old infected area at Mzingwane still continue healthy. Several horses died of horse-sickness.

The following animals have been treated with Mallein for Glanders upon entry, and found healthy:—Horses, 21; mules, 62; donkeys, 132; total, 215.

UMTALI.

African Coast Fever.

During the month the remainder of the Hondi Valley infected herd, 22 head in all, were destroyed. All infected herds have now been dealt with, either by slaughter or removal to clean veld, and no sick or susceptible cattle remain in any of the infected centres, which are guarded by Police.

GWELO.

No outbreaks of contagious disease. The test of the African Coast Fever Quarantine Area is proceeding satisfactorily. White Scour in calves caused a number of deaths.

VICTORIA.

Excepting a case of Rabies and Scab amongst native small stock, this district is free from disease. The cattle on the old Coast Fever area remain healthy. Three deaths from Horsesickness reported.

ENKELDOORN.

Two cases of Rabies reported; seven dogs destroyed.

MELSETTER, MAZOE, INSIZA, HARTLEY, MANGWE, WANKIE, GWANDA, BUBI, SHILOH, LOMAGUNDI, MREWAS, AND MARANDELLA.

All these districts are free of disease.

JANUARY, 1909.

BULAWAYO.

Rabies.

One rabid dog destroyed on 15th January. This animal was bitten in Salisbury on 23rd October by a rabid dog, and was kept under observation until about 7th January, when it was released and allowed to proceed to Bulawayo.

Glanders.

The following animals were tested with Mallein and found healthy:— Horses, 11; Donkeys, 34; Mules, 62; total, 107.

MZINGWANE.

African Coast Fever.

The cattle in the temperature camp remain healthy. It is now over 12 months since the last case of the disease.

INSIZA.

No contagious disease. Two horses and a mule died of Horse Sickness.

UMTALI.

African Coast Fever.

Fresh outbreaks none. Existing outbreaks: One calf born of a salted cow on the Forrest Farm developed the disease and was destroyed, as also were four other calves on the same area.

Horse Sickness.

The deaths of one horse and 6 mules was reported. One horse recovered. One of the mules had been inoculated.

Vegetable Poisoning.

At a farm near Umtali three cows developed the following symptoms:—Giddiness, swaying of the hind legs, decrease in lactation, subnormal temperatures, fæces of a thin clay-like consistency and colour, in which ropy mucus was present in considerable quantity. Recovery occurred in all three cases in from three to five days without interference. The G.V.S. expressed the opinion that the cause was some unknown vegetable poison.

VICTORIA.

The testing of the formerly infected area has been carried to a satisfactory conclusion. None of the cattle during the four months they were exposed showed the slightest symptoms of Coast Fever. It may be noted that all cattle were removed from the infected area in October, 1907, that the last authentic case of Coast Fever occurred in June, 1907. The whole district may now be regarded as free from Coast Fever infection.

Horse Sickness.

Two deaths reported.

SELUKWE.

African Coast Fever.

The test cattle on the formerly infected area remain healthy.

Horse Sickness

is reported as being very prevalent.

HARTLEY.

Tsetse Fly is becoming very troublesome and upwards of 60 deaths from Nagana have occurred during the last few months.

MELSETTER.

No contagious disease. Two horses died from Horse Sickness.

MAZOE.

No contagious disease. One horse died from Horse Sickness. Two oxen died from arsenical poisoning contracted whilst being dipped.

ENKELDOORN.

No contagious disease. Two horses and one mule died of Horse Sickness.

GWELO.

A few cases of Liver Disease amongst calves have been reported.

All other districts: No disease reported.

FEBRUARY, 1909.

SALISBURY.

With the exception of two suspected cases of Rabies, no contagious disease was reported.

Losses from horse sickness have been very severe.

BULAWAYO.

No contagious disease. The cattle on the old Coast Fever area at Nzingwani remain healthy.

The following animals were tested for Glanders upon entry and found healthy: Horses, 16; Mules, 81; Donkeys, 5; total, 102.

UMTALI.

African Coast Fever.

Existing Outbreaks: No deaths.

Fresh Outbreaks: One death occurred on Mr. Van Reit's farm, "Lowlands," which lies partly in this and partly in Portuguese territory. This farm has long been suspected as being infected, and is within the Police Cordon.

GWELO.

African Coast Fever.

The test cattle placed on the old infested area at Selukwe remain healthy.

Horse Sickness.

A large number of deaths have occurred from this disease.

VICTORIA

No contagious disease reported, the district being now free from Coast Fever. Three deaths reported from Horse Sickness.

ENKELDOORN.

Horse Sickness.

Fifteen horses and 14 mules reported having died from this cause during the month.

All Other Districts.

Nothing to report.

J. M. SINCLAIR,

Chief Veterinary Surgeon.

Agricultural Reports.

DECEMBER, 1908.

BULAWAYO.

FENCING.

As referred to last month a petition is at the present time being signed by the various farmers interested asking His Honour the Administrator to put Part I of the Fencing Ordinance into operation in that part of the Bubi District lying between Nyamandhlovu, the Bembesi river, and the southern boundary of the Bubi District.

All will agree that this is a step in the right direction, all the more valuable since it comes spontaneously from the farmers themselves and is the first attempt made to apply the provisions of the Fencing Ordinance in Rhodesia.

Cutworms have been reported very active and are on one farm destroying a field of 30 acres of mealies.

CATTLE IMPORTED.

A very nice consignment, including eleven Aberdeen Angus and five Shorthorn bulls, arrived during the month from Great Britain. A few of the animals stayed in Matabeleland but the majority passed through to Mashonaland. It is a very good sign to see such importations taking place, but it would be better still if a few heifers were also imported. It will have to be done eventually, and the sooner it is started the better for the cattle breeding industry.

There is still a good demand for Colonial bred heifers, and they are coming forward in fair numbers. Locally bred ones are practically unobtainable except at prohibitive prices.

Should there be a fairly big demand for cattle arise, such as might be created by say 50 new settlers requiring 30 head each, it is difficult to know where the number (1,500) could be obtained, unless some of the native districts of Mashonaland such as Victoria could furnish them.

HORSE SICKNESS

This disease has started and claimed a few horses as victims with no doubt more to follow them.

AGRICULTURAL SHOW.

The committee are pushing forward with the preparation of the prize list, and it is hoped to have everything in order early for the Show in June.

VICTORIA.

RAINFALL.

There has been less than an inch of rain this month, consequently both grazing and crops which were coming on nicely, have suffered considerably; in fact unless we have rain very shortly there is a most serious outlook. Chibi appears to be particularly bad.

STOCK.

Stock are all looking well, and there is no disease whatever except the old long-standing "Scab."

DISEASES.

The animals on the infected veld still remain normal and apparently that part of the district is clean. The police cordon has been withdrawn. There have been three deaths from horsesickness, being earlier than usual for this district.

GRAIN.

The question of the grain supply has become serious. Grain is unprocurable and although there is a quantity in Gutu, the donkey transport riders cannot fetch it in consequence of the state of the roads.

CATTLE TRADE.

The natives have practically stopped selling and those they do sell obtain good prices. A few head have also been sold to outside people by the local farmers at very fair prices.

GWELO.

STOCK.

Nothing of moment occurred during December amongst live stock, no contagious diseases having appeared among grown cattle.

White scour and gall-sickness were prevalent for a time amongst calves, with quite a percentage of deaths resulting, but chiefly from the treatment, which consisted of sheep dip, podophyllin, axle grease, etc.

JANUARY, 1909.

BULAWAYO.

THE SEASON AND CROPS.

Good rains have fallen during the month. In some cases mealies planted in low lying Vlei soils are suffering (turning yellow) from being waterlogged. Cutworms and borers are also at work among a good many fields.

SELUKWE.

STOCK.

Another satisfactory month has passed with regard to sickness in this district. The test cattle and all unsalted stock are doing well. Some very good dairy cows have lately been brought in.

Sheep and goats in this district are now clean. Horse-sickness is very prevalent among mules and a good many have died within the district last month. So far only one horse has died of the disease.

The native movements of cattle from Victoria and Chibi to Selukwe district have been considerable.

VICTORIA.

RAINFALL.

There have been good rains during this month and the outlook now is much more promising. Crops and grazing have improved wonderfully.

STOCK.

Stock are all looking well, and practically no disease in the district beyond a few cases caused by the wet weather (chiefly lung and liver complaints amongst calves).

Two horses have died from horsesickness.

Scab is prevalent at numbers of kaffir kraals.

GRAIN.

The opening of the roads for ox transport has relieved the district to a certain extent, and several lots of grain have been brought into town.

Mealies in small quantities are obtainable at £2 per 200 lbs. bag. Rapoko grain at from 27s. 6d. to 35s. per bag of 200 lbs. Oat forage at from 10s. to 15s. per 100 lbs.

OX TRANSPORT.

The relaxation of the existing Regulations by Government Notice No. 5 of 1909 has been greatly appreciated by the inhabitants of the district and has been freely taken advantage of.

All cattle being worked under the new conditions are regularly dipped or sprayed. In fact that principle is fully recognised here by all parties as being beneficial both to the animals and to the district.

CATTLE TRADE.

Local buyers are able to purchase from the natives at fair prices, and several good bargains have been made where the natives are short of grain, this being given in exchange for cattle. 100 bags of rapoko grain have just arrived from Selukwe for this trade. A decent beast for one bag is about the usual transaction.

MZINGWANI.

CATTLE.

During the month six deaths have been reported as occurring amongst the herds belonging to natives being due in all cases to attacks of wild dogs. A large pack of these animals has been occasionally seen in the vicinity of the particular native herds.

The cattle at the temperature camp are looking well and in good health, also those animals belonging to natives outside the fence.

CROPS.

The greater part of all the native crops are poor, mainly owing to the severe drought in December.

The mealies especially are very bad, the plants being scarcely three feet high and already in flower and bearing only one small cob.

There are however a few gardens mostly along the Mzingwani and Insiza rivers where the crops are looking well.

Heavy rains have fallen during the month but unfortunately too late for being of use to the earlier planted crops.

The cordon fence has sustained considerable damage from the flooded rivers, large portions having been completely carried away.

INSIZA.

There are no stock diseases to report from this district. All stock are now in fine condition, calves being exceptionally strong.

Throughout the month the rains were very copious.

Two horses have died from horsesickness within the last week, and one uninoculated mule.

ENKELDOORN.

During the month there has been no outbreak of any kind amongst stock.

Mr. Shand's shorthorn bull has died of gallsickness.

A mule and two horses have died during the month of horsesickness.

CROPS.

The mealie crops are looking very well but are not heavy owing to want of rain during the months of November and December. A few nice showers fell during the first part of January but after that it has been raining heavily almost every day.

A few farmers are preparing land for the purpose of planting potatoes next month (February).

Native crops are very good and promise to yield much more grain than last year.

Mealies for consumption are unobtainable at present and rapoko is very scarce also.

No farmers are going in for tobacco this year. Farmers intend putting in a good breadth of wheat this winter, also oats.

No locusts and no rabies is reported.

FEBRUARY.

In Matabeleland the petition for putting Part 1 of the Fencing Ordinance in force in a portion of the Bubi district has been forwarded to Salisbury. If it is put into

force a good proportion of the occupied farms in that area will be fenced or partly fenced within the next twelve months.

Redwater and gallsickness have been prevalent during the last two months, especially amongst imported stock. The two diseases have often existed at the same time in a herd, making it difficult for the owner to diagnose which disease the animals were suffering from. Isolated cases of redwater have been reported amongst stock bred in this country, but several cases of gallsickness have been reported in such animals without redwater being present at the same time.

We have been advising the use of methyl arsenite of soda for these diseases this year, and so far the results reported with regard to redwater are very favourable. One owner had a severe outbreak of this disease amongst some 50 imported Colonial heifers, and two died before he commenced the treatment, but after doing so no further deaths occurred, although there were about twenty that developed the disease—twelve in a severe form, standing with backs arched and urinating bloody-coloured urine frequently.

The dose that has been recommended has been one dram once a day for three days in succession for a well-grown-out beast, either dissolved in a small quantity (half a bottle) of cold water and used as a drench, or throw the powder on the tongue and wash it down with a little cold water.

The dose mentioned is a full dose, and should not be increased; in fact, after the three doses have been given mild symptoms of arsenical poisoning may be presented, such as an offensive diarrhoea; these symptoms usually pass off in a day or two, but it is advisable to give the animals about 10 drops of creosote mixed with half a bottle of cold water or more, well shaken up to mix thoroughly.

In cases of gallsickness, attended with constipation, it would be advisable at the commencement of the treatment to give a dose of Epsom salts or raw linseed oil, at the same time as the first dose of methyl arsenite of soda.

Methyl arsenite of soda can be obtained from the chemists in Bulawayo at about 3s. 6d. the ounce bottle, and creosote at 1s., so the cost of obtaining a stock of the

necessary medicine in case of outbreaks of these diseases is not excessive.

Scales for weighing the quantities are unnecessary; the creosote (a liquid) can be easily measured in drops, and the methyl arsenite of soda (a powder) can be bought in bottles containing exactly one ounce. If the contents of the bottle are poured out into a clean piece of paper in a heaped up pile, divide into two by separating this pile through the centre with a table knife, divide in the same way the remaining heaps twice, and eight heaps will result, containing as near one dram each as necessary for all practical purposes. These powders can be then wrapped in paper for use as required. If the animals are small the original ounce of powder can be divided into a greater number of powders by the table knife.

Horsesickness has been very bad this season, and a large number of animals have succumbed to it. The mules immunised during last season by Dr. Theiler's method have not escaped either. Three deaths occurred around Bulawayo and the same number in the Gwelo district that were immunised in Rhodesia, also six others in the Bubi district that were immunised at Pietersburg in the Transvaal.

A cure (?) for this disease has reached this country from the Barberton district in the Transvaal, so before this season is over there will likely be a chance of testing this remedy.

At Selukwe the testing of the district is proceeding satisfactorily. Since the end of November the Tebekwe cattle have been at large, and up to the present show no sign of Coast Fever. The temperatures of these cattle have been taken daily, and have not varied from the normal. The remainder of young stock and unsalted beasts that were confined previously to test are all looking exceedingly well. These, having been released, are now grazing at Selukwe township and outside.

Fifty head of cattle that are working daily between Tebekwe mine and the railway station, have been here fifteen days without showing any change.

Up to the present the number of deaths from horsesickness has been five horses and twelve mules. One owner lost seven uninoculated mules out of one stable. No case where a cure has been effected has occurred.

There are very few young small stock in the district, many dying off on account of the veld being too coarse. There have also been many cases of death due to poisonous plants picked up on the veld. There are a few isolated cases of scab among native goats. Sheep are not affected with this scab, and by continuous dipping, together with clean grazing ground, all small stock can be cured.

In the Gwelo district the weather has been wet and warm during the month, and grass is very good and still growing, so if March is reasonably fair a splendid crop of extra quality of hay will be secured. Farmers are waking up to the necessity of having a good lot of hay for winter feeding.

The river Gwelo only began flowing on the 28th of January, the veld having absorbed 23 inches of rain before any surplus went into the river, so it may be expected that grass will be green and nutritious well into the winter.

Maize promised very well until about three weeks ago, when the continuous rains and hot forcing weather caused a lot of spurious growths to take place, to the detriment of the cob that had already formed; it is thereby probable that when harvested the yield will be disappointing, although the stalks in many fields average over 11 feet in height.

All kinds of stock are in excellent condition. Horse-sickness has been unusually prevalent and fatal.

In the Umtali district of Mashonaland considerable areas of land are being cleared and turned over. There are various reasons for greater attention being paid, to agriculture, the chief being (1) the stoppage of ox transport on the roads, (2) the soaking rains have softened the ground, allowing of easy stumping and ploughing, (3) more farmers are realising that agriculture is profitable.

If stoppage of transport means increased attention to agriculture, it is a blessing in disguise. No country can prosper unless its farmers are doing well, and it means that money will stay in the country and not be expended in the purchase of tinned products from oversea. The townspeople obtain their wheat and meal from America or Australia, mealies of late from Portuguese East Africa or Natal, onions from Egypt, lucerne hay from Natal, and baled forage from Cape Colony and Australia.

The planting of cereals in the months of January and February has been attempted on two farms, and by so doing it is hoped to raise crops without irrigation, and at the same time escape the fungoid diseases that destroy the crops if sown too early in the wet season.

The veld is in good condition, and well made hay should ensue if the rains hold up permitting of it. There is a very excellent stand of lucerne on the Devonshire farm, no better to be seen elsewhere. One patch stood fifteen inches high after a ten day's growth. I saw some fine patches on which the grower is experimenting with manurial agents. The lucerne is growing on black granitic sand, and it is under irrigation. New Zealand spinach has for some time been grown in the Commonage Market Gardens, and is much appreciated as a vegetable. Of late one farmer has been experimenting with it, attracted by the growth, which takes place vigorously in the dry season, and he reports that all live stock eat it greedily.

Cattle are looking well, but ticks in the ears with sloughing of the parts, and abscesses have proved exceedingly troublesome, taking up much of the stock-owners' time. Contagious ophthalmia is also causing much trouble.

The season is proving rather too wet for small stock, and the condition has not much improved over last month. Footrot on clay and loam soils has been rather prevalent, and wire-worm is beginning to require attention and treatment.

The milk supply is ample, and the supply of butter is at least meeting the demand. Eggs have been almost unobtainable; the hens are moulting, and no great increase of eggs can be expected for a few weeks. Much live poultry is still being imported from Portuguese East Africa; in fact the local supply from farmers is not nearly sufficient.

The supply of local-grown grain is well nigh exhausted. The first consignments of early-grown mealies from Portuguese East Africa have come in, but not in sufficient quantity to relieve the tension. Mealies are quoted at 25s. per bag.

It is anticipated that the Portuguese East African mealies will be the first in, and will command all the high prices obtainable on the opening of the new season's

market. The local grower will come in later, and it is feared that low prices will befall him.

The Portuguese farmers have, from all accounts, at least 60,000 bags for export, and they will swamp the local market. It is rumoured, however, that our neighbours are pressing their Government to give facilities for export to Portugal, into which country colonial produce enters "duty free." The price obtainable f.o.r. by this means is reckoned at 11s. 6d. per bag.

The Eastern growers only hope (since Mozambique maize obtains the colonial produce rates and enters free of duty) is that the scheme outlined will mature, and thereby maintain the price at somewhere about 10s. per bag at the railway siding.

The total rainfall amounts to 29 inches. Nine inches have fallen during the month in light continuous showers.

In the Victoria district there is scarcely any agricultural increase to be observed; only a limited quantity of produce is saleable, so only a limited quantity is produced. The opportunities are magnificent, none better in Rhodesia, but there is no market.

There will be an abundance of native grain this year (rapoko), and in some parts fine mealies, but on the whole the latter will be scarce.

Forage is being imported from the Charter district and grain from Selukwe, also onions and potatoes, which does not speak well for local enterprise; but one must bear in mind that often it has been a feast or a famine and producers have been bitten, and since it is not a wealthy population, farmers do not care to risk a large outlay.

Numbers of cattle are being purchased by local people for cash and grain, but the natives are not generally anxious to sell. When they do they get a very fair price.

There has been quite an exodus of cattle going to the various mines lately (Ruby in particular), but in many cases it is more for the sake of getting the cattle in working condition for things that might be than for the actual work to be obtained on the spot.

The old Farmers' and Landowners' Association has been revived, and there is a good representation. The subscription is fixed at £1 1s., and at this date about thirty members have subscribed. It is to be hoped that more interest will be taken in it than previously.

Market Rates.

Salisbury: Market prices of Agricultural Produce as supplied by Messrs. Wightman and Co.

Mealies	19/- to 20/-	Oats, per bag	25/- to 27/6
Rapoko	16/- „ 17/6	Potatoes, per lb. ..	1d. „ 1½d.
Forage, per 100 lbs. . .	10/- „ 11/6	Onions, per lb. ..	2d. „ 3d.

Salisbury: Market prices of Live Stock as supplied by Messrs. Whitfield and Co.

Trained Oxen	£10 10s. to £13	Horses	£25 to £35
Untrained Oxen	£8 10s. to £10	Mules	£24
Cows (Native)	£9 to £10	Mules, V.D.	£30
Cows (Colonial), ac-		Donkeys	£5 10s. to £6 10s.
cording to milking		Fowls (Ordinary) ..	4/- to 5/-
capacity	£20 to £30	Pure-bred Fowls ..	15/- to 20/-
Colonial Heifers	£10	Turkeys	20/-
Slaughter Oxen	38/- to 40/-	Ducks	4/- to 5/-
Africander Bulls (Selected)	£20	Geese	12/6

Bulawayo: The following is a list of the week's quotations. March 12th.

GRAIN.—(Merchants' Prices).

Yellow Mealies	19/- to 20/-	Forage, per 100 lbs. ..	10/- to 10/6
White Mealies	20/- „ 21/-	Salt (Colonial) p. bag	11/6 „ 12/-
Kafir Corn (mixed) ..	13/- „ 14/-	Onions	16/- „ 17/-
Inyouti	12/- „ 13/-	Potatoes	16/- „ 17/-
Oats (Colonial)	20/- „ 21/6	Monkey Nuts (per bag)	14/6 „ 15/6
Bran	14/- „ 15/-	Beans	32/6 „ 33/6

LIVE STOCK.

Slaughter Cattle, fat,		Dairy Cows	£25 to £32 10s.
per 100 lbs.	37/6 to 40/-	Trek Oxen	£9 to £11 10s.
Slaughter Sheep (local)		Horses, Riding (un-	
per 100 lbs.	15/- „ 16/-	salted)	£17 10s. to £35
„ „ (Colonial)	23/6 „ 24/-	Mules (inoculated) ..	£25 to £30
Bechuanaland Goat ..		Colonial Heifers	£8 15s. to £12
„ Ewes	10/6 „ 12/-	Donkeys	£6 10s. to £8 10s.
Local Cows	£10 „ £15	Zambesi Cows	£7 10s. to £10

THE MORNING MARKET.

Cabbages (large size),		Potatoes, per bag ..	10/- to 17/-
per 3	1/- to 2/-	Watermelons, each ..	0/6 „ 1/-
Cabbages (small size),		Local Butter	1/3 „ 1/6
per 3	0/6 „ 1/-	Beetroot, p. 3 bunches	0/2 „ 0/5
Carrots, per 3	0/3 „ 0/5	Parsnips, p. 3 bunches	0/3 „ 0/4
Pumpkins, each	0/6 „ 1/-	Beans, per table ..	1/3 „ 3/6
Tomatoes, per row ..	0/9 „ 2/-	Marrows, per 3	1/- „ 1/6
Lettuce, per row	0/6 „ 1/3	Muscovy Ducks	2/6 „ 3/6
Eggs (imported)	1/6 „ 2/0	Aylesbury Ducks ..	3/6 „ 4/6
Eggs (local)	3/- „ 4/3	Turkeys	10/- „ 15/-
Firewood, per load ..	12/6 „ 20/-	Fowls	2/- „ 2/6
Peas, per table	1/6 „ 5/-		

Kimberley: Market quotations for Produce as supplied by Messrs. James Lawrence and Co., Limited. March 12th.

Bran, per bag 100 lb.	6/6 to 7/-	White Mealies, Colonial (hard), 203 lb.	12/6 to 13/6
Barley, per bag 163 lb.	8/6 „ 12/-	White Mealie Meal, 183 lb.	14/- „ 15/6
Beans, Sugar, bag 203 lb.	30/- „ 35/-	Oats, per bag, 150 lb.	9/- „ 10/-
Beans, Kafir, 203 lb.	none.	Lucerne Hay, per 100 lb.	4/6 „ 5/3
Chaff (Colonial), bale	4/6 „ 9/6	Onions, per bag 120 lb.	4/6 „ 7/6
Chaff, „ pressed, 100 lb.	3/- „ 4/-	Potatoes, per bag, 163 lb.	10/- „ 16/-
Forage, per 100 lb. (good)	4/9 „ 5/3	Potatoes (local)	11/- „ 17/-
Forage, per 100 lb. (inferior)	4/- „ 4/6	Tobacco, per lb. (good)	0/4 „ 0/7
Kafir Corn, South African mixed	10/6 „ 11/6	Tobacco, per lb. (inferior)	0/1 „ 0/-
Kafir Corn, White	11/- „ 12/6	Wheat, per bag 203 lb.	18/6 „ 20/-
Boer Meal (Colonial), unsifted, mixed	25/- „ 27/-	Butter, per lb. (fresh)	0/8 „ 0/10
Boer Meal (Colonial), sifted, mixed	27/6 „ 30/-	Butter (second qual.)	0/6 „ 0/7
Flour (Colonial), per bag 100 lb.	15/- „ 15/6	Eggs, per dozen	1/4 „ 1/6
Yellow Mealies, Colonial, 203 lb.	12/- „ 13/-	Ducks, each	1/9 „ 2/3
		Fowls, each	1/- „ 1/6
		Turkeys, each	3/- „ 7/-
		Hams and Bacon, per lb.	0/- „ 0/-

SLAUGHTER.

Oxen (good) prime, 600 lb. upwards	£8 to £11	Hamels, 40 lb. to 45 lb.	10/- to 13/6
Cows (good), 450 lb. upwards	£4 „ £7	Cape Sheep (good)	11/- „ 14/-
Calves „ 4d. per lb. dead weight.		Kapaters (good)	10/- „ 13/-
Pigs, 100 lb. (clean)	2½d., 3d. per lb. live weight.	Oxen, Trek	£6 to £7
Lambs, 30 lb.	7/- to 9/-	Riding Horses	£10 „ £25
		Draught Horses	£10 to £22 10s.
		Mares	£9 to £20

Mealies are slightly firmer. Kafir Corn weak. Oathay firm. Oats and Chaff plentiful and cheap. Wheat firm. First-class Potatoes in demand. Sound Dry Onions firm. Eggs weaker. Fat Poultry enquired for. Butter very plentiful and prices low. Fruit and Vegetables, fair supplies arriving. Slaughter Stock, only prime enquired for.

Johannesburg: Weekly market prices as supplied by Messrs. Hubert Morisse and Co., Commission Agents.

Barley, per 163 lb.	9/6 to 15/-	Lucerne, per 100 lb.	4/- to 5/9
Bran, per 100 lb. (Colonial)	8/3 „ 8/6	Manna	3/6 „ 4/6
Chaff best, 100 lb.	2/9 „ 3/6	Transvaal Hay	6d. „ 1/-
Eggs, per doz. (Col.)	1/10 „ 2/3	Oats, per 153 lb.	7/6 „ 11/-
Salt, per bag	4/9 „ 5/6	Potatoes, best, per 153 lb.	15/6 „ 20/-
Forage (Transvaal)	6/9 „ 7/-	Potatoes, medium and inferior	9/- „ 13/6
Forage (Colonial), best, per 100 lb.	6/9 „ 7/-	Onions, 120 lb.	6/6 „ 9/-
Forage, medium and inferior, per 100 lb.	1/6 „ 5/9	Turkeys (Cocks)	6/6 „ 13/-
S. Meal, best fine	26/3 „ 27/9	Turkeys (Hens)	3/- „ 5/6
Rye	12/- „ 13/3	Fowls	1/- „ 2/9
Wheat	19/6 „ 21/6	Ducks	1/9 „ 2/6
Mealies (Hickory King Whites)	14/3 „ 14/6	Geese	4/9 „ 5/6
Mealies (O.R.C. Whites)	13/6 „ 13/9	Pigeons	9d. „ 10d.
Mealies (Yellow)	13/2 „ 13/4	Butter (O.R.C.)	5d. „ 10d.
Kafir Corn, per 203 lb.	11/3 „ 12/-	Pumpkins, each	2d. „ 6d.
Hay, Sweet (Transvaal)	1/- „ 1/6	Beans, per 200 lb. (Sound)	12/6 „ 40/-

SlaughterOxen(prime)	£11 to £12 10s.	Lambs	8/6 to 14/-
SlaughterOxen(med.)	£8 to £10 10s.	Goats (Boer Kapaters)	11/- „ 19/6
Slaughter Cows	£5 to £7	Pigs (live weight)	3d. „ 4d.
Beef (per 100 lb., prime)	£1 10s. to £1 12s. 6d.		Good demand.
Beef (per 100 lb., medium)	£1 6s. to £1 9s.	Mules (large)	£17 to £22
Milch Cows (Cape)	£16 10s. to £27 10s.	Mules (medium)	£15 10s. to £16 10s.
Trek Oxen	£7 to £8 10s.	Mules (small)	£13 to £15
Tollies	£4 to £5	Horses (good)	£18 „ £25
Sheep (Cape and Bas-tard)	4d. per lb. ; 15/- to 19/-	Horses (ponies)	£12 „ £16
Sheep (Merino)	4d. per lb. ; 15/- to 20/6	Donkeys	£5 „ £6
Slaughter Ewes	8/6 „ 12/6	Heifers (12* to 18 months)	£6 to £6 10s.
		Heifers (2 to 3 years)	£7 to £8 10s.
		Cows (breeding)	£8 to £9 10s.

Good supplies of Slaughter Oxen continue to arrive, but Prime animals still find a ready sale. First-class Trek Oxen are in very fair demand, but poor or inferior quality are hard to sell. Tolleys are a glut and practically unsaleable. Sheep are arriving very freely, values are lower, but prime stuff sells readily. There is an excellent demand for Prime Boer Kapaters. Pigs are scarce, and prime young Porkers 60 to 100 lbs. sell readily. Good Mules and Horses are both scarce and sell well. There is a good supply of rubbish offering at low rates. Donkeys are scarce and in better demand. Breeding stock very plentiful and cheap. We can offer some very fine young Merino ewes cheap.

SOUTH AFRICAN STUD BOOK.

A RECORD of all classes of Stock, the object being to encourage the breeding of Thoroughbred Stock and to maintain the purity of breeds, thus enhancing their value to the individual owner and to the country generally.

Applications for Membership and entries of Stock should be addressed :

For Cape Colony to—

A. A. PERSSE, P.O. Box 703, CAPE TOWN.

For Transvaal to—

F. T. NICHOLSON, P.O. Box 134, PRETORIA.

For Orange River Colony—

E. J. MACMILLAN, GOVERNMENT BUILDINGS,
BLOEMFONTEIN.

A. A. PERSSE,

Secretary South African

Stud Book Association.

Government Notices.

No. 188 of 1906.

26th July, 1906.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw the regulations promulgated by Government Notices Nos. 264 of 1905 and 164 of 1906 and declare the following to be of full force and effect in lieu thereof within the Province of Matabeleland, exclusive of the District of Gwelo as described and defined by section 4 (c) of the "Southern Rhodesia Boundary Regulations Amendment Regulations, 1898," which area is hereby declared to be an area infected with a destructive disease and is hereinafter called the said area.

1. No cattle shall be moved from any other part of the Territory of Southern Rhodesia into the said area.

2. The movement of cattle to, from or across any defined area appearing in the schedule hereto or any area which may hereafter be added to that schedule so long as such area remains in and is not withdrawn from the schedule is absolutely prohibited save and except as is provided for in sections 3, 6 and 7 of these regulations.

3. The movement of all cattle within the said area is prohibited save and except

- (a) On permission granted by an Officer specially authorised thereto by the Administrator.
- (b) Within the boundaries of any single farm where such cattle are depastured.
- (c) Within an area of land enclosed by a substantial fence.
- (d) Within a radius of four miles of any native kraal situate within the boundaries of any Native Location or Reserve, and as is hereinafter further provided.

4. The movement of cattle for slaughter, *bona fide* farming, mining or breeding purposes or for private milk supplies shall be permitted under the written authority of an official thereto duly authorised subject to the following terms and conditions :

- (a) That cattle are moved to the nearest or most suitable railway station or siding, and thence by rail to their destination, or, where the district is not served by a railway by the most suitable route to their destination, all cattle travelling by road shall be under the personal supervision of a responsible white man approved of by the Cattle Inspector or of a native approved of by the Native Commissioner and the Cattle Inspector of the district within which the movement takes place.
- (b) That written permission of owners, occupiers or managers of all occupied land, and in the case of Native Reserves, of the Native Commissioner of the District over which such cattle shall pass to the nearest station, siding or destination is obtained ; provided that in the event of such owners, occupiers, managers or Native Commissioner refusing to grant such permission, the Controller of Stock may direct the issue of a permit of removal, if satisfied that the necessary permission is withheld without good and sufficient cause.
- (c) That such cattle shall before being moved, be thoroughly disinfected by dipping or by spraying to the satisfaction of the Officer issuing permit, and at the expense of the owner of such stock, and if intended for slaughter shall where possible be branded under the supervision of the Officer issuing permit with the letters "V.D." on the near side of neck.

- (d) That cattle intended for slaughter shall, on arrival at destination subject to the terms of clause (e) hereof, be immediately taken to the prescribed quarantined area and there be quarantined and confined, and where not branded in terms of clause (c) hereof, be similarly branded under the supervision of a duly authorised officer.
 - (e) That all cattle intended for slaughter brought to their destination and not disinfected by dipping or spraying in terms of clause (c) hereof shall be immediately taken to the public dipping station and there be thoroughly dipped or sprayed before being taken to the quarantine area.
 - (f) That all cattle admitted to the quarantine area shall be slaughtered within twenty-one days of their admission, and under no pretext whatever shall cattle so admitted be permitted to leave the said area alive; all such cattle shall after admission to the said area be considered as likely to be infected with disease and if found wandering outside the said area or in possession of any person may be destroyed under an order of the Chief Inspector or Controller of Stock.
 - (g) That on arrival at destination cattle other than slaughter cattle shall be dipped or sprayed and shall be effectually isolated from all other cattle on the same land for a period of four weeks.
5. The movement of working cattle may be permitted under the following conditions only :—
- (a) Within a radius of six miles of any working mine or mine in course of development for the purposes of such mine, provided that such cattle shall only be moved under a permit of a duly authorised officer, and shall be dipped every fourteen days or where no dipping tank is available be thoroughly sprayed with an approved dip, provided further that such permission shall not be granted when it conflicts with any other section of these regulations, or if such movement is considered dangerous to other cattle within the six mile radius.

Sub-section (b) cancelled by Government Notice No. 216 of 1907.

6. In the event of the failure of pasturage or water on land on which cattle are located, the movement of such cattle will be permitted, provided :—

- (a) That such movement shall be to nearest available pasturage by the most suitable route.
 - (b) That written consent be obtained in terms of Section 4 (b) hereof.
 - (c) That movement shall be by permit only of a duly authorised officer, and under the supervision of a responsible white man, or of a native approved of by the Cattle Inspector and Native Commissioner of the district.
7. For the purposes of cleansing an area from disease the Controller of Stock may, on the authority of the Administrator and on the advice of the Chief Inspector of Cattle, and subject to such conditions as may be stipulated, permit the removal of cattle from a scheduled area to an adjacent clean area.
8. All applications for the removal of cattle under sections 4 and 5 hereof shall be submitted to and approved of by the Veterinary Department before being granted and when such movement is from one Native District to another the application shall be submitted for the approval of the Government Veterinary Surgeon at Bulawayo and the Native Commissioners of the Districts to and from which the removal is made.

Section 9 cancelled by Government Notice No. 114 of 1908.

10. All veld-fed animals within the limits of the various Commonages or Townlands or other centres where there is common grazing ground, and wherein cases of African Coast Fever have occurred within two years of the date of publication hereof, and upon which public dipping tanks have been established, shall be dipped therein at least once every fourteen days: provided that the Controller of Stock may, on the advice of the Veterinary Department, direct the temporary suspension of this regulation for such reasons as he may regard as sufficient.

11. The following charges shall be paid at the time of dipping by the owner of the cattle or other animals required to be dipped under these Regulations in respect of any dipping done at a public dipping tank :—

For cattle (over six months)	3d. per head.
For horses and mules	3d. „
For calves (six months and under)	2d. „
For small stock	½d. „

with a minimum charge of 6d. for any number of animals not aggregating such fee under above tariff.

12. Any disinfecting by spraying required to be done under these regulations shall be carried out with an approved insecticide by the owner of the animals so sprayed ; provided that the Inspector may, at his discretion, carry out such disinfection with the assistance of and at the entire cost of the owners of the animals to be sprayed, the cost of such disinfection being payable at the time of the spraying.

13. Whenever the owner, occupier, or manager of a farm shall adopt measures for the cleansing of his cattle running thereon, either by spraying or dipping or by any other method permitted by these or any other regulations, the Cattle Inspector may order such natives or others as have cattle on the said farm to cleanse such cattle, and the Native Commissioner of the District in which such farm is situated may enter into an arrangement with the native owners of cattle to cleanse such cattle at a charge to be mutually agreed between the said owner, occupier, or manager and the said native owners.

14. Any person contravening any of the provisions of these regulations shall, upon conviction, be liable in respect of each offence to the fines and punishments prescribed by the Ordinance, and in cases where no special punishment is provided, to a fine not exceeding £20, or in default of payment to imprisonment with or without hard labour for any period not exceeding three months, unless the penalty be sooner paid.

SCHEDULE.

- (1) Fingo Location.
- (2) An area within a radius of ten miles of Ntolas Kraal on the farm Emangeni.
- (3) An area comprising the farms Upper and Lower Umvutcha, Reigate, Upper Nondwene, Mapane, Government Farm No. 5, Trenance and the plots adjoining the farms Umvutcha.

No. 216 of 1907.

Department of Agriculture,
Administrator's Office,
Salisbury, 10th October, 1907.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw Sub-section (b), Section 5 of Government Notice No. 188 of 1906, and declare the following to be of full force and effect in lieu thereof :—

Within the said area from private farms and trading stations to any centre of consumption, or to a railway station or siding, or to and from any other farm, or from a mine to a railway station or siding for the purpose of transporting fuel or mining timber, under the permit of a duly authorised officer, which permit shall fully set forth the route to be traversed ; provided that no permit shall be issued until the person applying for the same shall produce the written consent of the owners, occupiers, or managers of occupied lands proposed to

be traversed, and, in the case of native reserves, of the Native Commissioners, and that such cattle shall before being moved be thoroughly disinfected by dipping or spraying at the expense of the owner, and to the satisfaction of the officer issuing the permit; provided further that, in the event of such consent being unreasonably withheld, the Controller of Stock may direct the issue of a permit.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 217 of 1907.

Department of Agriculture,
Administrator's Office,
Salisbury, 10th October, 1907.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw as from the 1st October, 1907, the regulations promulgated by Government Notices No. 189 of 1906 and No. 185 of 1907, and declare that the following shall be of full force and effect in lieu thereof from that date within the province of Mashonaland and the fiscal division of Gwelo, as defined by the "Southern Rhodesia Boundary Regulations Amendment Regulations, 1898," which areas are hereby declared to be areas infected with a destructive disease:—

1. The movement of all cattle within the said area is prohibited save and except:—

- (a) On permission granted by an officer specially authorised thereto by the Administrator.
- (b) Within the boundaries of any single farm where such cattle are depastured.
- (c) Within any area of land enclosed by a substantial fence.
- (d) Within the boundaries of the various commonages, town lands, or grazing ground common to any mining camp.
- (e) Within a radius of four miles of any native kraal situate within the boundaries of any native location or reserve, the site of such kraal shall be deemed to be the place where it is situated at the date of publication hereof, and as is further provided.

2. The movement of cattle for slaughter purposes shall be permitted under the written authority of an officer thereto duly authorised, subject to the following terms and conditions:—

- (a) That such cattle are moved by the most suitable route to the centre of consumption. All cattle travelling by road to be under the personal supervision of a responsible white man, or native approved of by the Cattle Inspector.
- (b) That before cattle may enter from a native district not included in any particular group of districts as defined in Section 6 (b) the written permission of owners, occupiers, or managers of all occupied land, and, in the case of native reserves, of the Native Commissioner of the district over which such cattle shall pass to the nearest station, siding, or centre of consumption is obtained; provided that in the event of such owners, occupiers, managers, or Native Commissioners refusing to grant such permission, the Controller of Stock may direct the issue of a permit of removal if satisfied that the necessary permission is withheld without good and sufficient cause.

- (c) That such cattle shall, on arrival at the centre of consumption, subject to the terms of clause (d) hereof, be immediately taken to the prescribed quarantine area, and there be quarantined and confined, and branded with the letters "V.D." on the near side of the neck under the supervision of a duly authorised officer.
- (d) That all cattle brought into any centre of consumption shall be disinfected by dipping or spraying at the public dipping station before being taken to the quarantine area.
- (e) That all cattle admitted to the quarantine area shall be slaughtered within 21 days of their admission, and only be permitted to leave the area for the purpose of being driven to the abattoir for slaughter. All such cattle shall, after admission to the said area, be considered as likely to be infected with disease, and, if found wandering outside the said area or in possession of any person, may be destroyed under an order of the Chief Inspector or Controller of Stock.
- (f) That intermediate depots, or concentration camps, for slaughter stock may be allowed at centres approved of by the Chief Inspector of Cattle, provided that no such camp shall be situated within less than a radius of five miles of any commonage, town lands, or grazing ground common to any mining camp, railway station or siding.

3. The movement of cattle required for *bona fide* mining, farming, breeding and dairying purposes and for private milk supplies may be permitted on the written authority of a duly authorised officer, subject to the following terms and conditions:—

- (a) That such movement shall take place subject to the conditions set forth in Section 2 (a) and (b).
- (b) That whenever such cattle shall at any place along the route have passed within a radius of less than five miles of an infected area, the cattle shall upon arrival at their destination be effectually isolated from all other cattle on the same land for a period of four weeks.
- (c) That whenever the cattle being removed shall at any portion of the route have passed within native districts where infected areas exist, the consent in writing to such movement be obtained from all owners of cattle on farms adjoining that to which movement takes place; and in the case of native reserves of the Native Commissioners of the districts; provided that should such consent be unreasonably withheld by any of the aforesaid persons the Controller of Stock may direct the issue of a permit.
- (d) That such cattle required for breeding and dairying purposes, or for private milk supplies, when moved to within the boundaries of the various commonages, town lands, or of grazing ground common to any mining camp or other centre where cases of African Coast Fever have occurred within 15 months, shall be confined in some enclosed place approved of by the local Cattle Inspector, and, if a case of African Coast Fever occur in such enclosure, shall not be liberated therefrom except in terms of Section 5 hereof, until 15 months after the last occurrence of African Coast Fever within the enclosure in which they are kept, nor shall they be allowed, after liberation, to run upon any of the land specified herein, unless such land has been free from African Coast Fever for a period of 15 months.
- (e) All cattle introduced in terms of the preceding sub-section (d) shall, on arrival, be taken direct to the Government dipping station and there be dipped or sprayed.
- (f) All cattle confined in terms of clause (d), and all calves born within the said enclosures, shall be sprayed every 14 days, as may be directed by the Cattle Inspector.
- (g) No cattle shall be moved from one native district to another unless with the permission of the local Veterinary Officer and the Cattle Inspectors of the districts to and from which such movement takes place.

4. All calves having less than two permanent teeth running within the boundaries of the various commonages, town lands, or grazing ground common to any mining camp or other centres where cases of African Coast Fever have occurred within 15 months of the date of these Regulations, or born thereon after such date, shall be removed to some enclosed place approved of by the local Cattle Inspector, and shall not be liberated or allowed to run at large on such commonage, town lands or common grazing ground until 15 months after the occurrence of the last case of African Coast Fever within the enclosure in which they are confined, or upon such commonage, town lands or common grazing ground.

- (a) No calves shall be permitted to accompany working cattle travelling along the roads mentioned in Section 7, sub-section (c), and all calves born of such working cattle whilst travelling shall not be removed from the place where born.

5. For the purpose of cleansing an area of disease the Controller of Stock may, under the authority of the Administrator and on the advice of the Chief Inspector of Cattle, subject to such conditions as may be stipulated, permit the removal of calves and other cattle to an adjacent clean area.

6. The movement of working cattle other than those specified in Section 7 hereof may be permitted within the following areas and on the terms and conditions hereinafter set forth :—

- (a) Within a maximum radius of 15 miles of any working mine, or mine in course of development, for the purposes of such mine, provided that :—

- (1) Such cattle shall only be moved under permission of a duly authorised Officer, and shall be dipped every 14 days where a dipping tank is available within such area, or, in the absence of a dipping tank, be thoroughly sprayed with an insecticide.
- (2) Such permission shall not be granted where it conflicts with any other section of these regulations, or if such movement is considered to be dangerous to other cattle within the 15 mile radius.

- (b) Within the boundaries of the Gwelo and Lomagundi Native Districts, and within and between the boundaries of the following adjoining Native Districts : (1) Salisbury, North and South Mazoe ; (2) Hartley, Charter and Chilimanzi ; (3) M'tokos, M'rewas, Marandellas and Makoni ; (4) Inyanga, Makoni and Umtali (as defined by Government Notice No. 13 of 1899) ; (5) Along the road West of the Sabi River from Odzi Bridge to Makondo Copper Mine, subject to the following conditions :

- (1) That the movement will be permitted for such period as the Controller of Stock may in his discretion, and on the advice of the Chief Inspector of Cattle, deem expedient, provided that such permission may at any time be withheld or withdrawn without notice.
- (2) That all applications for removal shall be approved of by the Cattle Inspectors of the districts through which the cattle pass.
- (3) Provided that in the event of such Cattle Inspectors refusing to grant permits for the removal of cattle, the Chief Inspector may, on the advice of the local Veterinary Officer, direct the issue, if satisfied that the necessary permission is withheld without good and sufficient cause.
- (4) That all such cattle are dipped every 14 days where a tank is available, or, in the absence of a tank, are thoroughly disinfected by spraying.

7. The movement of "salted" or immune working cattle shall be permitted on the following terms and conditions :—

- (a) That such cattle have been registered and branded under the supervision of the Cattle Inspector with the brand "T.O." on near shoulder and the registration number on near horn, in terms of Section 7, clauses (a) and (b) of Government Notice No. 109 of 1905.

(b) That the movement of such cattle shall only take place under the written permit of a duly authorised officer and subject to the conditions that they are disinfected by dipping every 14 days, where a dipping tank is available, or, in the absence of a dipping tank, by thorough spraying with an insecticide.

(c) That movement of such cattle only shall be permitted :—

- (1) Along the main roads of the Melsetter District.
- (2) From Umtali to the Makondo Copper Fields.
- (3) From Melsetter to Umtali.

8. In the event of failure of pasturage or water on land on which cattle are located the movement of such cattle will be permitted, provided :

- (a) That such movement shall be to the nearest available pasturage by the most suitable route.
- (b) That written consent be obtained in terms of Section 2, clause (b) hereof.
- (c) That such movement shall be by permit only of a duly authorised officer and under the supervision of a responsible white man, or of a native approved of by the Cattle Inspector of the district.

9. All applications for the removal of cattle under Sections 2, 3 and 8 hereof shall be submitted to, and approved of by, the local Veterinary Officer before being granted.

10. All permits granted under the provisions of these Regulations shall specify the number and brands of cattle, route to be travelled and period allowed, and may define places of outspan, and all other conditions endorsed on such permits by the officer issuing the same shall be strictly observed.

11. All veldt-fed animals within the limits of the various commonages or town lands, or other centre where there is common grazing ground within the districts of Umtali and Melsetter and the scheduled area at Selukwe, upon which public dipping tanks have been established, shall be dipped therein at least once every 14 days ; provided that the Controller of Stock may, on the advice of the Veterinary Department, direct the temporary suspension of this regulation for such reasons as he may regard as sufficient.

12. The following charges shall be paid at the time of dipping by the owner of the cattle or other animals required to be dipped under these regulations in respect of any dipping done at a public dipping tank :—

For Horned Cattle (six months old and over)	..	3d. per head.
For Horses and Mules	.. .. .	3d. ..
For Calves (under six months) and Donkeys	..	2d. ..
For Small Stock	.. .. .	½d. ..

with a minimum charge of 6d. for any number of animals not aggregating such fee under the above tariff.

13. Any disinfecting by spraying required to be done under these regulations shall be carried out with an approved insecticide by the owner of the animals so sprayed : provided that the Inspector may at his discretion carry out such disinfection with the assistance of and at the entire cost of the owner of the animals sprayed, the cost of such disinfecting being payable at the time of spraying.

14. Whenever the owner, occupier, or manager of a farm shall adopt means for cleansing his cattle running thereon, either by spraying or dipping or any other method permitted by these or any other regulations, the Cattle Inspector may order such natives or others as have cattle on the same farm to cleanse such cattle or any others before permitting them to enter or pass over such an area, and the Native Commissioner of the district in which such farm is situated may enter into an arrangement with the native owners of cattle, to cleanse such cattle at a charge to be mutually agreed upon between the said owner, occupier or manager and the said native owners.

15. Any person contravening the provisions of these regulations shall be liable to the punishments prescribed by the Ordinance, and in cases where no special punishment is prescribed by the said Ordinance to a fine not exceeding £20, or to a period not exceeding three months' imprisonment with or without hard labour in default of payment of any fine inflicted.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 66 of 1907.

Department of Agriculture,
Administrator's Office,
Salisbury, 28th March, 1907.

AFRICAN COAST FEVER.

NOTWITHSTANDING anything to the contrary by regulation provided, I, under and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," hereby provide as follows:—

No cattle shall be allowed to be at large, or moved about for the purposes of work, or other cause, within the area defined hereunder, unless an Inspector shall be satisfied that the said cattle are immune from the disease known as African Coast Fever, and shall have caused such cattle to be branded with the letters "T O" on the near shoulder.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

P. D. L. FYNN,
Acting Treasurer.

AREA.

From a point on the Tebekwe River one and a half miles North East of the Wanderer Mine in a straight line to the Wanderer Dam, thence in a straight line to the Sebanga Poort, thence along the top of the Eastern slope of the Poort Hills to a point half a mile west of the Paf Mine, thence to the Lundi River in a straight line, thence in a straight line East to the Victoria Road Drift on the Tebekwe River, and thence up the River to the first named point, situate in the Native District of Selukwe.

No. 67 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 19th March, 1908.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers vested in me by Section 5 of the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw that portion of Government Notice No. 94 of 1905 relating to an area set apart for the depasturing and quarantine of slaughter cattle at Selukwe, and declare the undermentioned area to be set apart in lieu thereof:—

A piece of fenced land in extent about 300 acres, situated on the farm Sebanga and adjacent to the Township of Selukwe.

W. H. MILTON, Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON, Treasurer.

No. 114 of 1908.

Department of Agriculture,
Administrator's Office,

Salisbury, 16th April, 1908.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw section 9 of Government Notice No. 217 of 1907, and declare the following to be of full force and effect in lieu thereof:—

Notwithstanding anything to the contrary elsewhere provided, all applications for the removal of cattle under sections 2, 6 and 8 of the Regulations published under Government Notice No. 217 of 1907 shall be submitted to, and approved of, by the local Government Veterinary Surgeon or Cattle Inspector before being granted, except in the native districts of Lomagundi, North and South Mazoe, Mrewas, Marondellas, Makoni, Inyanga, Salisbury, Hartley, Charter, and Chilimanzi, within which districts officers duly authorised to issue permits may authorise such removal without submitting the aforesaid applications to, and obtaining the approval of, the local Veterinary Officer.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer

Provisions extended to Native District of M'danga by Government Notice No. 170 of 1908.

No. 123 of 1908.

Administrator's Office,

Salisbury, 23rd April, 1908.

UNDER and by virtue of the powers conferred on me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby provide as follows:—

1. For the purposes of the more effectual control and supervision of cattle in any infected area the Controller of Stock may direct the branding of any such cattle with a special brand by him selected.

2. Any person who shall refuse or neglect to afford all reasonable facilities for branding cattle as aforesaid shall be liable to a fine not exceeding twenty pounds, and in default of payment to imprisonment with or without hard labour for a period not exceeding three months.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council,

F. J. NEWTON,
Treasurer.

No. 295 of 1908.

Department of Agriculture,

Administrator's Office,

Salisbury, 1st October, 1908.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel Government Notice No. 8, of the 19th day of January, 1905, and so much of any other regulations as may be repugnant to or inconsistent with the subjoined regulations, which are hereby declared to be of full force and effect.

1. The importation of the following animals from the respective countries enumerated is prohibited, owing to the existence or supposed existence of destructive diseases affecting the said animals in the said countries :—

- (1) All animals from the island of Mauritius.
- (2) All animals from German South-West Africa, and all animals except donkeys from German East Africa.
- (3) Pigs from the colonies of the Cape of Good Hope, Transvaal, and the Orange River Colony, the Bechuanaland Protectorate, the Tati Concession, and other countries in which swine fever exists, subject, however, to the exceptions contained in the proviso to this section.
- (4) Dogs from the territories of North-Eastern and North-Western Rhodesia and Portuguese East Africa; provided, however, that dogs from countries from which importation is permitted may be introduced through the port of Beira and brought direct into this Territory.
- (5) Sheep and goats from (a) the districts of Albany, Alexandria, Bathurst, Bedford, East London, Fort Beaufort, Humansdorp, Jansenville, Kingwilliamstown, Komgha, Peddie, Somerset East, Stockenström, Uitenhage, and Victoria East, in the Cape Colony; (b) the districts of Barberton, Lydenburg, Marico, Pretoria, Rustenburg, Waterburg, and Zoutpansberg, in the Transvaal; (c) Swaziland; (d) Portuguese Territory; (e) places north of the Zambesi River.

Provided, however, that the Controller of Stock may at his discretion permit the importation of pigs under six months of age for breeding purposes from the places mentioned in sub-section (3), and sheep and goats from the places mentioned in sub-section (5) hereof, on production of a certificate of a duly authorised Government veterinary officer that such animals are free from disease, have not been in contact with diseased animals, and have not come from an area where destructive disease has existed for twelve months previously.

2. The importation of organic manures, except guano, is strictly prohibited, and the importation of bone meal and bones required for fertilising or feeding purposes will only be permitted when accompanied by the certificate of a responsible and competent person that they have been thoroughly disinfected by treatment by superheated steam or other approved method. Any such manures, bone meal or bones introduced into Southern Rhodesia contrary to this regulation shall be liable to immediate destruction.

3. The areas set out in Schedule "A," and such further areas as may be added to the said schedule, shall be used in connection with pasture lands of the places to which they relate for the quarantining of animals suffering from any destructive disease other than glanders, epizootic lymphangitis or African Coast Fever.

4. The appointment of the areas set out in Schedule "B" hereto for the depasturing and quarantining of animals for slaughter in connection with the places therein mentioned is confirmed.

5. The several districts of Southern Rhodesia are hereby declared to be an area infected with scab amongst sheep and goats and the movement of all sheep and goats from any farm to beyond the limits thereof, or from their usual grazing ground within the limits of any town lands or native reserves

to any other place, is prohibited, except under the written permit of an Inspector or Sub-Inspector. Such permit shall set forth the number and description of animals to be moved, the route they shall travel and the period for which the permit shall be in force. In cases where it may appear necessary or desirable the person to whom any such permit is issued may be required to cause the animals referred to therein to be dipped before being moved.

6. The introduction of sheep and goats against which no prohibition exists may be permitted by rail, subject to the following provisions :—

- (1) Plumtree shall be regarded as the port of entry.
- (2) All animals shall be accompanied by a certificate in the form set out in Schedule "C" hereto; provided, however, the Controller of Stock may allow the introduction of well-bred sheep or goats intended for sale or stud purposes without being previously dipped.
- (3) All animals shall be thoroughly dipped at their owners' expense within sixteen days after their arrival; provided, however, that animals intended for immediate slaughter shall be exempt from dipping if marked with a distinctive brand on the back.

7. The introduction of sheep and goats against which no prohibition exists may be permitted by road, subject to the following provisions :—

- (1) M'Lala Drift and Fort Tuli shall be regarded as ports of entry.
- (2) All animals shall be accompanied by a certificate in the form set out in Schedule "C" hereto.
- (3) All animals shall be thoroughly dipped at their owners' expense within sixteen days after their arrival.

8. The owner or person in charge of any horse, mule or donkey entering Southern Rhodesia by rail shall immediately report such arrival to the Veterinary Office at Salisbury, Bulawayo and Umtali respectively, and no such animal shall be detained at any intermediate station without the written authority of a Government Veterinary Surgeon.

9. The owner or person in charge of any horse, mule or donkey entering Southern Rhodesia by road shall immediately report such arrival at the police camp nearest to the place where such entry is made, and the officer in charge of such police camp shall immediately report to the Veterinary Department, which shall direct what steps are to be taken to test such animals with mallein, as in the following clause provided.

10. All horses, mules and donkeys upon entering Southern Rhodesia shall be tested with mallein, and the owner or person in charge of such animals shall, in all respects, carry out the lawful directions of the Inspector while such animals are being tested; provided that this regulation shall not apply to animals in transit by railway through Southern Rhodesia and which are not detained *en route*.

11. The Inspector may direct the detention of any animal, and its isolation for the purposes of such examinations and tests as may be deemed expedient during which period of isolation or detention it shall be maintained and tended at the expense of the owner. If in the case of any such animal a second injection of mallein, applied at an interval of not less than ten days, is followed by a reaction indicative of the existence of glanders, such animal shall be forthwith destroyed.

12. Horses, mules and donkeys lawfully in this Territory, and required for purposes necessitating frequent crossing of the border to and from Portuguese East Africa, may be allowed so to cross on such terms as to registration, branding, testing and other conditions as the Chief Veterinary Surgeon may from time to time deem expedient to prescribe.

13. All horses, mules and donkeys depastured on the town lands of Melsetter and Umtali or on any public outspan adjoining such lands, and within the following area known as the Penhalonga, Imbesa and Samba Valleys, as bounded by the Umtali Waterfall Range on the north, the divide following beacons 18, 24 and 27 on the east, the Christmas Pass Range on the south,

and the Palmyran Range on the west, in the district of Umtali, shall be dipped every fourteen days, by or at the expense of the owner or person in charge of such animals, unless the local Veterinary Officer shall see fit to dispense with such dipping

14. An Inspector may direct the thorough cleansing and disinfecting of trucks which may be reasonably suspected of being sources of infection of any destructive disease, and may direct the destruction of *truck fittings*, fodder, excreta or other matter or thing which may be reasonably calculated to convey such infection.

15. Any person contravening the provisions of these regulations, or the instructions or directions given in terms of these regulations, shall be liable in respect of each offence to a penalty not exceeding twenty pounds, or in default of payment to imprisonment with or without hard labour for a period not exceeding three months, unless where more or heavier penalties have by the aforesaid Ordinance, or by other regulations framed thereunder, been expressly provided.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator.

F. J. NEWTON,

Treasurer.

SCHEDULE "A."

Areas on or near pasture land used in connection with townships set apart for the quarantining of animals suffering from any destructive disease other than glanders, epizootic lymphangitis or African Coast Fever :—

1. For the township of Salisbury and its neighbourhood, the Government Farm Makabusi, as defined in Government Notice No. 13 of 1898, namely, about six miles from Salisbury on the Old Charter Road, and bounded on the north, north-east and west by the farm "Willowdale," and on the south and south-east by the Makabusi River.

2. For the township of Umtali, a triangular piece of land situate to the north-east of the township, being that portion of the farm "Birkley" which falls in British territory.

3. For the township of Melsetter, a piece of land included within those lines bounding the pasture lands laid out around the township, which are in common with the outspan in the west, Sawerombi on the north, and Westfield on the north-east, bounded further on the south by a line drawn from the common beacon of Westfield and Lindley to the common beacon of Fairfield and outspan.

4. For the township of Enkeldoorn, a piece of land about $2\frac{1}{2}$ miles due west of the township and bounded as follows : From a point about 400 yards above the junction of a stream running south of Enkeldoorn township with streams running west from the Police Camp ; thence along the first stream to the junction aforementioned ; thence along a valley running due south from the said junction to a point about 700 yards distant ; thence in a north-westerly direction to a point on the top of a rise about 1,200 yards distant ; thence in a straight line to the first-mentioned point.

5. For the township of Victoria, a strip of land half-a-mile in width lying immediately to the west of the gunpowder magazine, and extending from the Macheke River to the Chekoto range of hills.

6. For the township of Gwelo, a triangular piece of ground within the reserved lands around Gwelo. It is bounded south by the Watershed Block along its boundary running from its joint beacon with Kanuck westwards to another beacon 1,518 Cape roods distant, bounded north-westwards by a line about 1,350 roods in length to the Inoculation Station, and bounded north-eastwards by a line from the first-mentioned beacon to the Inoculation Station, and about 1,400 roods in length. This piece of ground is called the Inoculation Camp.

7. For the township of Bulawayo, that portion of the commonage bounded on the west and north by the Bulawayo-Mafeking and Gwelo railway lines, on the east by the road known as "Hillside Avenue," on the south to the limits of the commonage and Hillside, known as "Napier's Lease," approximately 4,750 acres in extent.

SCHEDULE "B."

Areas set apart for depasturing and quarantining of animals for slaughter :—

SALISBURY.—Description of the area.—A piece of land, 400 acres in extent, situated on the Makabusi River, below Maggio's plot, towards the southern boundary of the Salisbury commonage.

BULAWAYO.—Description of the area.—That piece of fenced land situated on the Bulawayo commonage between the railway line, to the south, and the Solusi Road, adjoining and to the south-west of the Government dipping tank, in extent 1,000 acres, more or less.

GWELO.—Description of the area.—Starting from a point where the Ingwenia Road crosses the railway, along this road past the sanitary stables to a point a quarter of a mile west, thence in a line parallel with the railway to the Gwelo River, thence along the river to the commonage beacon No. 11, thence in a straight line to the Shamrock road where it is intersected by the Scout's Spruit, thence along the Shamrock road to where it joins Main Street extension, along this to the railway line, and down this to the starting point.

UMTALI.—Description of the area.—Starting from a point at the south-east corner of the farm "Devonshire" and south-west of "Waterfall," up the stream to where it is joined by the stream commonly known as Rifle-butt Spruit, and up this spruit to a point 300 feet below Paulington Bridge. Thence almost due north on the west of Penhalonga Road to the sanitary pits and from the sanitary pits to the Cemetery, thence due west to the "Devonshire" line and along this line south to south-west corner beacon of "Waterfall."

SELUKWE.—Description of the area.—A piece of fenced land, in extent about 300 acres, situated on the farm "Sebanga" and adjacent to the township of Selukwe.

PENHALONGA.—Description of the area.—A piece of land bounded as follows :—To the northward by a line starting from the south-east beacon of the hotel stand to the south-west and south-east beacons of Crawford's butchery. To the eastward from the south-east beacon of Crawford's butchery to the northern boundary of the Penhalonga Proprietary Mines' ground. To the southward along the northern boundary line of the Penhalonga Proprietary Mines' ground. To the westward from the north-west beacon of the Penhalonga Proprietary Mines' ground to the south-east beacon of the hotel stand.

VICTORIA.—Description of the area.—A strip of land, half-a-mile in width, lying immediately to the west of the gunpowder magazine, and extending from the Macheke River to the Chekoto range of hills.

SCHEDULE "C."

I,
 residing at
 in the district of in the
 Colony, do solemnly and sincerely
 declare that the animals enumerated below are free from any contagious
 disease, including scab, and have not been in contact with any infected
 animals within six months from date hereof, and that to the best of my
 knowledge and belief such animals in travelling to* Station
 will not come in contact with any animals amongst which scab or any other
 contagious disease has existed during that period; further, that such animals
 were thoroughly disinfected by dipping on, and
 will enter Southern Rhodesia within ten days of having been dipped.

And I make this solemn declaration conscientiously believing the same to
 be true.

Declared to at on this day
 of before me

.....
 Resident Magistrate, Government Veterin-
 ary Surgeon, Scab Inspector, or Police
 Officer of district from which animals are
 being sent.

Number and general description of animals being sent

Owner's Name and Address

Place in Southern Rhodesia to which animals are being sent

* Station within Colony of origin.

CERTIFICATE ISSUED UNDER PROVISIONS OF SECTION I, GOV-
 ERNMENT NOTICE No. 295 OF 1908.

This is to certify that the animals enumerated below are, in my opinion,
 free from any destructive disease, including scab, and to the best of my know-
 ledge and belief have not been in contact with any infected animals nor come
 from, or through, a locality where any such disease is known to exist or has
 existed for twelve months from date hereof.

Date

Place

.....
 Signature of Government Veterinary Surgeon

Number and general description of animals, Pigs, Sheep, ..
 Goats.

Place from which animals are to be sent

Owner's Name and Address

Place in Southern Rhodesia to which it is desired to send the animals

No. 110 of 1908.

Department of Agriculture,

Administrator's Office,

Salisbury, 16th April, 1908.

IMPORTATION OF CATTLE.

UNDER and by virtue of the powers conferred on me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and repeal so much of the Regulations published under Government Notice No. 187, dated the 26th of July, 1906, as relate to the importation of cattle from the Colony of the Cape of Good Hope and the United Kingdom of Great Britain and Ireland, and make the following provisions in lieu thereof :—

1. The importation of cattle may be permitted from the Colony of the Cape of Good Hope and the Orange River Colony on the following terms and conditions :—

- (1) A permit shall be required from the Chief Inspector which may contain such conditions as shall from time to time appear expedient.
- (2) Applications for permission to import shall be in the form "A" attached hereto, and accompanied by a declaration in the annexed form "B."
- (3) The importation of cattle with more than two permanent central incisor teeth shall not be permitted.
- (4) All importations shall be by rail, and for the purposes thereof Bulawayo shall be regarded as the port of entry.
- (5) All cattle imported in terms of these Regulations shall on arrival at Bulawayo, Salisbury, or Umtali be removed to a place of quarantine under the supervision of an Inspector of Cattle, there to be submitted to such examination and tests as the Chief Inspector may direct. If such examination or tests disclose the existence of any destructive disease the cattle shall be immediately destroyed and the carcasses thereof disposed of in such manner as a Government veterinary surgeon may authorise or require. The Chief Inspector may permit of any examination or tests as aforesaid being dispensed with in the case of cattle in transit by rail for any place beyond the boundaries of Southern Rhodesia.
- (6) All expenses or losses incident to quarantine, examination, testing or destruction as aforesaid shall be borne by the owner of the cattle.

2. The importation of cattle from the United Kingdom of Great Britain and Ireland may be permitted under the following terms and conditions :—

- (1) Importation shall be through and direct from the coast ports of the Cape Colony, and there shall be a consignment note or other satisfactory evidence that cattle so imported have come direct from Great Britain or Ireland.
- (2) The provisions of sub-sections (5) and (6) of section 1 hereof shall apply to importations in terms of this section.

3. No person shall import cattle in terms of these Regulations except for his own use, provided however that permission may be granted to import for others on the applicant disclosing the name of the person or persons for whom he proposes to act.

4. Any person introducing cattle in contravention of these Regulations, or failing to comply with any conditions attached to permits to import, or furnishing applications, declarations, or other necessary documents known to be false in any material particular, or failing to comply with all lawful directions as to quarantine, examination, testing, destruction or disposal of carcasses, shall be liable to a fine not exceeding £20 for each animal in respect

of which such offence shall have been committed, and in default of payment to imprisonment with or without hard labour for any period not exceeding six months, unless higher or greater penalties shall have been provided for such offences by the "Animals Diseases Consolidation Ordinance, 1904," provided however that the penalties imposed by these Regulations shall not exempt any cattle from destruction in terms of the aforesaid Ordinance.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,

Treasurer.

ANNEXURE "A."

APPLICATION FOR CATTLE IMPORTATION PERMIT.

GOVERNMENT NOTICE NO. 110 OF 1908, SECTION I (2).

1. Applicant's Name and Address.....
2. Number and Class of Cattle to be imported.....
3. Area or Farm and District where Cattle are at present located.....
4. Area or Farm and District to which Cattle are to be moved.....

Applicant's Signature.....

Date

Application

Permit No.

ANNEXURE "B."

I,.....residing on the farm
in.....do solemnly and sincerely declare that the animals
enumerated below have been in my possession since birth, and that lung
sickness, pleuro-pneumonia or any other contagious or infectious disease has
not existed amongst any of my cattle or on my farm within the last four years,
and that to the best of my knowledge and belief such cattle in travelling
to.....* station will not come in contact with any
animals amongst which lung sickness or any other contagious or infectious
disease has existed during that period.

And I make this solemn declaration conscientiously believing the same to
be true.

Declared to at.....on this.....day
of.....before me....., Resident Magistrate
for the District of

Number of Animals.....Bulls.....Heifers.....

Breed.....

Seller's Name and Address.....

Purchaser's Name.....

Place in Southern Rhodesia to which animals are being sent.....

* Station within the Colony of origin.

No. 124 of 1908.

Department of Agriculture,
Administrator's Office,

Salisbury, 30th April, 1908.

IMPORTATION OF CATTLE.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby declare and make known that notwithstanding anything to the contrary elsewhere provided, the importation of cattle for *bona-fide* slaughter purposes may be permitted into the Umtali district from the adjoining Portuguese Territory under the following terms and conditions:—

1. The importation and disposal of cattle introduced in terms of these regulations shall be under the absolute control and direction of the local veterinary surgeon or other duly appointed officer, and shall be regulated by the requirements of consumption.

2. The importation shall be limited to a fenced enclosure approved of by the Controller of Stock, which shall be situated on the Rhodesian side of the Anglo-Portuguese frontier line where it passes through the farm "Birkley."

3. Cattle introduced as aforesaid shall be immediately slaughtered, and no meat thereof shall be removed without special permission unless it is entirely free from skin and ears.

4. The hides of animals slaughtered in the said enclosures shall be immediately immersed in an approved insecticide for a period of not less than twelve hours, and shall not be removed from the said enclosure unless accompanied by a certificate signed by a veterinary surgeon that they have been satisfactorily disinfected and dried.

5. Any person contravening the provisions of these regulations, or the instructions or directions of the local veterinary surgeon or other duly authorised official, given in terms of these regulations, shall be liable, in respect of each offence, to a penalty not exceeding £20, or, in default of payment, to imprisonment, with or without hard labour, for a period not exceeding three months, unless where more severe or heavier penalties have, by the aforesaid Ordinance, been expressly provided.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council,

F. J. NEWTON,
Treasurer.

No. 244 of 1908.

Administrator's Office,

Salisbury, 20th August, 1908.

THE subjoined Proclamation by the Governor of German South-West Africa, prohibiting the importation into that territory of large cattle and grass-hay from Rhodesia, the Bechuanaland Protectorate and Angola, is hereby published for general information.

By command of His Honour the Administrator.

H. MARSHALL HOLE,
Secretary, Department of Administrator.

PROCLAMATION.

Proclamation of the Imperial Governor of German South-West Africa concerning the prohibition of the importation of cattle, etc., from Rhodesia, the British Bechuanaland Protectorate and Angola, dated the 23rd of June, 1908.

Acting on the authority of section 15 of the law relating to Protectorates, etc. (*Imperial Law Gazette*, 1900, p. 13), and section 5 of the regulations issued by the Imperial Chancellor concerning the powers of the authorities

of the Protectorates in Africa and the South Sea and their right to issue orders by Proclamation referring to naval and consular matters, dated the 27th September, 1903 (*Colonial Gazette*, p. 509),

It is herewith proclaimed and ordered for the South-West African Protectorate as follows :—

Section 1.—The importation of large cattle of every kind—namely, bulls, oxen, cows, heifers and calves—as well as of horns, hoofs and skins thereof, and further, the importation of grass-hay from Rhodesia, the British Bechuanaland Protectorate and Angola is prohibited.

Section 2.—Whoever contravenes this order shall be punishable by a fine not exceeding 10,000 M., or by imprisonment not exceeding three months, or by a fine and imprisonment combined. The objects or articles concerned in the contravention of this Proclamation shall be subject to confiscation.

Section 3.—This Proclamation is in force from the date of its publication.

The Imperial Governor,

(Sgd.) VON SCHUCKMANN.

Windhuk, 23rd June, 1908.

No. 248 of 1908.

Department of Agriculture,

Salisbury, 27th August, 1908.

IMPORTATION OF CATTLE.

UNDER and by virtue of the powers conferred on me by the “Animals Diseases Consolidation Ordinance, 1904,” I do hereby authorise the importation from the United States of America of cattle required for *bona-fide* breeding purposes, provided, however, that such importation shall be subject to the provisions of Government Notice No. 110 of the 16th April, 1908, relating to the importation of cattle from the United Kingdom of Great Britain and Ireland.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 268 of 1907.

Department of Agriculture,

The Treasury,

Salisbury, 26th December, 1907.

REMOVAL OF CATTLE FOR SALE.

NOTWITHSTANDING anything to the contrary contained in the Regulations published under Government Notices Nos. 188 of 1906 and 217 of 1907, I, under and by virtue of the powers conferred upon me by the “Animals Diseases Consolidation Ordinance, 1904,” do hereby provide as follows :—

1. The assembly of cattle for purposes of sale by auction or otherwise may be permitted at such places and under such conditions as the Chief Inspector may from time to time prescribe.

2. The movement of cattle into the province of Mashonaland and the fiscal division of Gwelo from other places in Southern Rhodesia may be permitted under such conditions as the Chief Inspector may from time to time prescribe.

3. The granting of permits for the purposes of Sections 1 and 2 hereof and the nature of the conditions to be attached thereto shall be at the absolute discretion of the Chief Inspector.

4. Any person contravening the provisions of these Regulations or the conditions attached to permits issued thereunder shall be liable to a fine not exceeding £20 or in default of payment to imprisonment with or without hard labour for a period not exceeding three months.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 356 of 1908.

Department of Agriculture,
Administrator's Office,
November, 1908.

MOVEMENT OF CATTLE INTO MATABELELAND.

NOTWITHSTANDING anything to the contrary contained in the Regulations published under Government Notices Nos. 188 of 1906 and 217 of 1907, I, under and by virtue of the powers conferred on me by the "Animals Diseases Consolidation Ordinance, 1904," do hereby provide as follows:—

1. The movement of cattle from the Province of Mashonaland into the Province of Matabeleland and from the Fiscal Division of Gwelo into other parts of Matabeleland may be permitted under such conditions as the Chief Inspector may from time to time prescribe, provided, however, that such movement shall not be permitted in respect of cattle imported from the country to the North of the Zambesi River until they shall have first remained for a period of at least twelve months in the Province of Mashonaland or the Fiscal Division of Gwelo.

2. The granting of permits for the purposes hereof, and the nature of the conditions to be attached thereto, shall be at the absolute discretion of the Chief Inspector.

3. Any person contravening the provisions of these regulations, or the conditions attached to permits issued thereunder, shall be liable to a fine not exceeding £20, or, in default of payment, to imprisonment with or without hard labour for a period not exceeding three months.

By Command of His Honour the Administrator in Council.

No. 47 of 1909.

Administrator's Office,
Salisbury, 15th March, 1909.

IMPORTATION OF CATTLE FROM NORTH OF THE ZAMBESI.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel Government Notices Nos. 152 of 1908 and 318 of 1908.

1. The introduction of cattle *via* Feira is hereby prohibited, save and except such cattle for which permits have been issued prior to date hereof.


2. Slaughter cattle may be imported from North-Western Rhodesia up to and including 14th May, 1909, provided that:—

- (a) the permission of the Chief Inspector of Cattle or of a Government Veterinary Surgeon be first had and obtained;
- (b) all such cattle shall be conveyed by rail *via* Victoria Falls, which is hereby declared a port of entry for cattle, and be carried to the station or siding nearest to the centre of consumption;


- (c) on arrival at their destination, such cattle shall be subject to the Regulations controlling the movements and disposal of slaughter cattle.

3. On and after 15th May, 1909, the importation of cattle of all descriptions shall be and is hereby prohibited from all places north of the Zambesi River.

4. Cattle for general purposes may be imported from North-Western Rhodesia from 1st April, 1909, until 14th May, 1909, provided that :—

- (a) the permission of the Chief Inspector be first had and obtained ;
- (b) all cattle imported shall be introduced by rail only and *via* the Victoria Falls, and shall be branded before entry with the letters " N.Z. " on the near shoulder ;
- (c) all cattle shall on entry be taken to a prescribed area to the north of the Gwaai River, where they shall remain in quarantine for such period as may be ordered by the Chief Inspector of Stock, being not less than six weeks from the date of their arrival ;
- (d) no cattle shall be removed from the quarantine area until examined and certified to be free of disease by a Government Veterinary Surgeon ;
- (e) all cattle removed from the quarantine area as aforesaid shall be taken direct to their destination and shall not be moved therefrom for a period of twelve months from the date of arrival thereat. 

5. Every application for permission to introduce cattle under section 4 shall be accompanied by a certificate in the form of Annexure "A" attached to this Notice.

6. Any person introducing any cattle from North-Eastern or North-Western Rhodesia in contravention of these Regulations, or submitting any certificate false in any material particular, or refusing or neglecting to submit cattle introduced to proper inspection and tests, or failing to quarantine properly such cattle when introduced, shall be liable to a fine not exceeding £10 for every animal in connection with which the offence complained of is committed, and in default of payment of any fine inflicted, to imprisonment with or without hard labour for any period not exceeding three months, and the cattle in regard to which the complaint has been laid and proved may, under the written direction of the Administrator, be destroyed without compensation. 

7. For general information it is notified that steps are being taken to prosecute investigations into the nature of the supposed destructive disease which there is reason to believe exists in East and Central Africa, and that the continuance or withdrawal of the above restrictions is largely dependent upon such decision as may be arrived at. The present step is therefore to be regarded as purely a precautionary one.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

ANNEXURE "A."

I,.....residing on the farm....., in the district of....., in the territory of North-Western Rhodesia, do solemnly and sincerely declare that the animals enumerated below have been in my possession for twelve months, and that I purchased them from....., residing in the district of..... in the territory of North-Western Rhodesia, on the.....day of.....(as facts permit), and that no case of lung-sickness or other contagious disease has existed amongst any of my cattle or on my farm, or other cattle with which they have been in contact, during the past

two years, and that, to the best of my knowledge and belief, such cattle, in travelling to Victoria Falls, will not come in contact with any animals amongst which lung-sickness or other contagious disease has existed during that period.

And I make this solemn declaration conscientiously believing the same to be true.

Declared to at.....on this.....day of
.....before me.

Magistrate, District Commissioner, or
J.P., North-Western Rhodesia.
District.....

No. of animals.....bulls.....
cows.....heifers.....
bullocks.....

Breed.....

Seller's name.....

Purchaser's name.....

Place in Southern Rhodesia to which animals are being sent.....

No. 39 of 1909.

Department of Agriculture,

Administrator's Office,

Salisbury, 11th March, 1909.

MOVEMENT OF CATTLE, PROVINCE OF MATABELELAND.

1. UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw the Regulations promulgated by Government Notices Nos. 188 of 1906 and 216 of 1907, and declare the following to be of full force and effect in lieu thereof within the province of Matabeleland, exclusive of the district of Gwelo, as described and defined by section 4 (c) of the Southern Rhodesia Boundary Regulations Amendment Regulations, 1898, which is hereby declared to be an area infected with a destructive disease, and is hereinafter called the said area.

2. The movement of all cattle within the said area is prohibited save and except

- (a) on permission granted by the local Cattle Inspector ;
- (b) within the boundaries of any single farm where such cattle are depastured ;
- (c) within an area of land enclosed by a substantial fence ;
- (d) within a radius of four miles from any native kraal situate within the boundaries of any native location or reserve, and as hereinafter further provided.

3. The movement of cattle for slaughter, grazing, *bona fide* farming, mining or breeding purposes, or for private milk supplies, shall be permitted under the written authority of an official thereto duly authorised, subject to the following terms and conditions :—

- (a) that the written permission of owners, occupiers, or managers of all occupied land, and in the case of native reserves, of the Native Commissioner of the district over which such cattle shall pass, is first obtained ; provided that in the event of such owners, occupiers, managers or Native Commissioners refusing to grant permission, the Controller of Stock may direct the issue of a permit of removal, if satisfied that the necessary permission is withheld without good and sufficient cause ;

- (b) that such cattle shall, before being moved, be thoroughly disinfected by dipping or spraying, to the satisfaction of the officer issuing the permit, and at the expense of the owner of such stock, and, if intended for slaughter, shall where possible be branded, under the supervision of the officer issuing the permit, with the letters "V.D." on the near side of the neck ;
- (c) that cattle intended for slaughter shall, on arrival at destination subject to the terms of clause (d) hereof, be immediately taken to the prescribed quarantine area and there be quarantined and confined, and, where not branded in terms of clause (b) hereof, be similarly branded under the supervision of a duly authorised officer ;
- (d) that all cattle intended for slaughter brought to their destination and not disinfected by dipping or spraying, in terms of clause (b) hereof, shall be immediately taken to the public dipping station and there be thoroughly dipped or sprayed before being taken to the quarantine area ;
- (e) that all cattle admitted to the quarantine area shall be slaughtered within twenty-one days of the admission, and only be permitted to leave the area for the purpose of being driven to the abattoir for slaughter ; all such cattle shall, after admission to the said area, be considered as likely to be infected with disease, and if found wandering outside the said area, or in possession of any person, may be destroyed under an order of the Chief Inspector or Controller of Stock.

4. The movement of working cattle may be permitted under the following conditions only :—

Within the said area from private farms, mines and trading stations to any centre of consumption, or to or from a railway station or siding, or to and from any other farm under the permit of a duly authorised officer, which permit shall fully set forth the route to be traversed ; provided that no permit shall be issued until the person applying for the same shall produce the written consent of owners, occupiers or managers of occupied lands proposed to be traversed, and in the case of native reserves, of the Native Commissioners, and that such cattle, before being moved, be thoroughly disinfected by dipping or spraying at the expense of the owner, and to the satisfaction of the officer issuing the permit ; provided, further, that in the event of such consent being unreasonably withheld, the Controller of Stock may direct the issue of a permit.

5. All applications for the removal of cattle from one native district to another shall be submitted for the approval of the Government Veterinary Surgeon at Bulawayo and the Cattle Inspector of the district to which the removal is to be made.

6. All permits granted under the provisions of this notice shall specify the number and brands of cattle, route to be traversed, and time allowed for each journey. Any breach of these or other conditions endorsed on the permit by the issuing officer shall be deemed a contravention of these Regulations, in terms of section 9 hereof.

7. All veld-fed animals within the limits of the various commonages or townlands, or other centres where there is a common grazing ground and upon which public dipping tanks have been established, shall be dipped therein at least once every fourteen days ; provided that the Controller of Stock may, on the advice of the Veterinary Department, direct the temporary suspension of this Regulation, for such reasons as he may regard as sufficient.

8. The following charges shall be paid at the time of dipping by the owner of the cattle or other animals required to be dipped under these Regulations, in respect of any dipping done at a public dipping tank :—

For Cattle (over six months)	..	..	3d. per head.
„ Horses and Mules	..	..	3d. „
„ Calves (six months and under)	..	..	2d. „
„ Small Stock	..	..	½d. „

with a minimum charge of 6d. for any number of animals not aggregating such fee under tariff.

9. Any disinfecting by spraying required to be done under these Regulations shall be carried out with an approved insecticide by the owner of the animals so sprayed; provided that the Inspector may, at his discretion, carry out such disinfection, with the assistance of and at the entire cost of the owners of the animals sprayed, the cost of such disinfection being payable at the time of the spraying.

10. Any person contravening any of the provisions of these Regulations shall, upon conviction, be liable, in respect of each offence, to the fines and punishments prescribed by the Ordinance; and, in the cases where no special punishment is provided, to a fine not exceeding £20; or, in default of payment, to imprisonment, with or without hard labour, for any period not exceeding three months, unless the penalty be sooner paid.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 129 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 7th May, 1908.

RABIES.

WHEREAS it has been shown to me that it is expedient to take measures to prevent the spread of rabies in the undermentioned district. Now Therefore, under and by virtue of the powers in me vested by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby authorise and direct that all dogs at the kraals for the natives Chiduku and Maveja, and all dogs within a radius of ten miles of such kraals in the native district of Makoni, shall be destroyed by shooting, poisoning or other approved methods, and that the carcases of all dogs shall be burnt or buried at a depth of not less than three feet below the surface.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

P. D. L. FYNN,
For Treasurer.

No. 178 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 18th June, 1908.

RABIES.

UNDER and by virtue of the powers in me vested by the "Animals Diseases Consolidation Ordinance, 1904," I hereby declare and make known that the provisions of Government Notice No. 42 of 1907, relating to the muzzling of dogs shall not apply to the following areas:—

The Towns and Commonages of Salisbury, Bulawayo, Umtali, Gwelo, Victoria, Selukwe, Gwanda, Hartley, Enkeldoorn and Melsetter.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 215 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 23rd July, 1908.

RABIES.

UNDER and by virtue of the powers in me vested by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw the provisions of Government Notice No. 178 of 1908 in so far as they relate to the town and commonage of Gwelo, and declare that the provisions of Government Notice No. 42 of 1907 regarding the muzzling of dogs shall apply to the said town and commonage.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 283 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 24th September, 1908.

RABIES.

WHEREAS it has been shown to me that it is expedient to take measures to prevent the spread of rabies in the undermentioned district: Now therefore, under and by virtue of the powers in me vested by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby authorise and direct that all dogs in the undermentioned areas, in the native district of Chibi, with the exception of three male dogs at each kraal (to be exempted at the discretion of the Native Commissioner of the district) shall be destroyed by shooting, poisoning or other approved methods, and that the carcases of all dogs so destroyed shall be burnt or buried at a depth of not less than three feet below the surface:—

1. Within a radius of six miles of the Native Commissioner's station.
2. Within a radius of six miles of Messrs. Frankis & Rolleston's store.

W. H. MILTON
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 351 of 1908.

Administrator's Office,
Salisbury, 16th November, 1908.

RABIES.

UNDER and by virtue of the powers in me vested under the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw the provisions of Government Notice No. 178 of 1908, in so far as they relate to the town and commonage of Salisbury, and declare that the following shall be in force within the said area for a period of six weeks from and including the 17th day of November, 1908:—

1. All dogs shall be kept in a safe enclosure or chained up.
2. Dogs may be taken out for exercise if kept on a leash or chain, held by the person exercising them

3. Every dog found at large at any time during the abovementioned period may be summarily destroyed by any person, and the owner or person responsible for the custody of such dog shall be liable to the penalty hereinafter prescribed.

4. Any person contravening any of the above Regulations, or failing to carry out any of the provisions thereof, shall be liable, on conviction, to a fine not exceeding £10 for each offence, or, in default of payment, to imprisonment with or without hard labour, for a period not exceeding one month.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator.

P. D. L. FYNN,

Acting Treasurer.

No. 30 of 1909.

Administrator's Office,

Salisbury, 25th February, 1909.

RABIES.

WHEREAS it has been shown to me that it is expedient to take measures to prevent the spread of rabies in the undermentioned district: Now therefore, under and by virtue of the powers in me vested by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby authorise and direct that all dogs in the undermentioned areas, in the native district of Gutu, with the exception of six male dogs at each kraal (to be exempted at the discretion of the Native Commissioner of the district), shall be destroyed by shooting, poisoning, or other approved methods, and that the carcasses of all dogs so destroyed shall be burnt or buried at a depth of not less than three feet below the surface:—

Within a radius of six miles from Tshitsa's Kraal.

Within a radius of six miles from Mount Rosa (Mr. Swartz's store).

W. H. MILTON,

Administrator.

By command of His Honour the Administrator in Council.

P. D. L. FYNN,

Acting Treasurer.

No. 45 of 1909.

Administrator's Office,

Salisbury, 13th March, 1909.

RABIES.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel and withdraw the Regulations promulgated by Government Notices Nos. 42, 156 and 228, of 1907, except as to acts done or penalties incurred at the date of the coming into force of this Notice, and except as to officers appointed under Government Notice No. 286 of 1906, whose appointments shall remain valid for the purposes of this Notice, and declare the following Regulations shall have full force and effect in lieu thereof:—

1. All and several the various native districts of Southern Rhodesia are hereby declared to be areas infected with the disease of rabies.

2. Subject to any penalty a dog owner may have incurred under Government Notice No. 285 of 1906 by not registering his dog before the first day of February, 1907, the owner of any unregistered dog liable to registration may register the same at any time after the said date.

3. On and after the date of this Notice becoming operative the owner of every dog arriving at the age of three months, and the owner of every dog imported into Southern Rhodesia after that date, shall register such dog with an official appointed for that purpose, provided that this provision shall not apply to any municipality, township or similar area in which provision for registration exists and is duly enforced.

4. A registration badge shall be issued for each and every dog registered, and the said badge shall be attached to a proper and sufficient collar to be supplied by the owner, which must be placed and kept on each dog registered.

5. A fee to cover the cost of registration and supply of badge in the amount of sixpence will become demandable and payable on registration of each dog.

6. Any dog found at large after the date of this Notice becoming operative, not having and bearing a registration badge duly issued by an official or the local authority, may be summarily destroyed by any person.

7. Any Magistrate, Police Officer, Native Commissioner, Government Veterinary Surgeon, or other official vested with the performance of functions under the "Animals Diseases Consolidation Ordinance, 1904," may, on it appearing to him that any dog or other animal is showing symptoms which justify investigation as to whether such dog or animal is suffering from rabies or not, order the proper detention, isolation and control of such dog or animal, either in the hands of the owner or at some other suitable place.

8. Should any dog show symptoms which lead to the suspicion that such dog may be suffering from rabies, the owner thereof shall forthwith notify the fact to the nearest official vested with powers under these Regulations, who shall immediately report the same to the Chief Veterinary Surgeon, and shall either destroy the said dog or isolate and secure it for further observations.

9. On its appearing that any animal is actually suffering from rabies, any of the above-mentioned officials may order the destruction of such animal, or may himself destroy it, and may further take control of or destroy, if deemed necessary, any animal which has been in contact with a rabid animal or an animal suspected of being rabid.

10. The carcases of all animals destroyed on account of their being infected with rabies shall be thoroughly burnt by the person or official destroying them, save that such parts as may be required for scientific investigation may be retained under proper precautions. In any case in which a human being has been bitten by a rabid animal, the head of such animal shall, if possible, be taken and sent to the nearest veterinary official.

11. In the event of any outbreak of rabies occurring, all owners of dogs within fifteen miles of such outbreak, or such other area as may be fixed, shall, on notification by any of the above-mentioned officials, or by Government Notice in the *Gazette*, at once place and keep their dogs in a safe enclosure, or chained up, for a period of not less than six weeks from such notification, or such other period as may be fixed, but may be taken out for exercise if kept on a chain or leash held by the person exercising them.

12. Any dog found at large in a notified area at any time during the prescribed period may be summarily destroyed by any person, and the owner or person responsible for the custody of such dog shall be liable to the penalty hereinafter laid down.

13. Any person contravening any of the above Regulations, or failing to carry out any of the provisions thereof, shall be liable, on conviction, to a fine not exceeding £10 for each offence; or, in default of payment, to imprisonment, with or without hard labour, for a period not exceeding one month.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 46 of 1909.

Administrator's Office,
Salisbury, 15th March, 1909.

RABIES.

UNDER and by virtue of the powers vested in me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby declare the provisions of clause 11 of Government Notice No. 45 of 1909 to be in force over the area within fifteen miles of Mr. G. Heanley's farm, which area includes the Municipality of Salisbury, for a period of six weeks, from and including the 15th day of March, 1909.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 133 of 1908.

Department of Agriculture,
Administrator's Office,

Salisbury, 7th May, 1908.

IMPORTATION OF PLANTS, ETC., REGULATIONS.

UNDER and by virtue of the powers in me vested by the "Importation of Plants Regulation Ordinance, 1904," I do hereby cancel Government Notice No. 211 of 1907 and declare the following to be of full force and effect in lieu thereof:—

1. Until further notice no person shall introduce into this Colony any grape vine, Virginia creeper, or other plant of the family *vitacæa* or any fruit or other portion thereof, from any of the following districts of Cape Colony:—

Aberdeen	Albany.	Alexandra.
Bathurst	Bedford.	Cradock.
Cathcart.	East London.	Fort Beaufort.
Graaff-Reinet.	Glen Grey.	Humansdorp.
Jansenville.	King William's Town.	Port Elizabeth.
Komgha.	Middelburg.	Somerset East.
Peddie.	Queenstown.	Tarka.
Stockenströöm.	Stutterheim.	
Uitenhage.	Victoria East.	

This regulation shall not, however, apply to grape jam, wine, brandy, vinegar or must.

2. If at any time an inspector shall find any grape vine, Virginia creeper or other plant of the family *vitacæa*, or any fruit or other portion thereof introduced into this territory in contravention of this regulation, he shall order the same to be immediately removed from the territory, or the Secretary for Agriculture may order the same to be destroyed without delay.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 197 of 1908.

Department of Agriculture,

Administrator's Office,

Salisbury, 2nd July, 1908.

IMPORTATION OF PLANTS, ETC., REGULATIONS.

UNDER and by virtue of the powers in me vested by the "Importation of Plants Regulation Ordinance, 1904," I do hereby provide that the Regulations published under Government Notice No. 133 of the 7th May, 1908, shall not apply to the importation of raisins.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,

Treasurer.

No. 221 of 1908.

Department of Agriculture,

Administrator's Office,

Salisbury, 30th July, 1908.

IMPORTATION OF PLANTS, ETC., REGULATIONS.

UNDER and by virtue of the powers in me vested by the "Importation of Plants Regulations Ordinance, 1904," I do hereby cancel and withdraw the prohibition contained in Government Notice No. 236 of the 21st November last against the importation of any tree, shrub or vegetable and the fruit, leaves, cuttings, bark or any part thereof from the Orange River Colony.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,

Treasurer.

No. 249 of 1908.

The Treasury,

Salisbury, 27th August, 1908.

IT is hereby notified for public information that any person who shall cut down for use as fuel, or for any other purposes than *bona-fide* farming, mining or manufacturing purposes, or cause to be so cut down the "Wild Westeria" (native name M'Pakwa or M'poea) tree, will be liable to prosecution for contravention of the provisions of the Forest and Herbage Preservation Act 1859, and upon conviction to a fine not exceeding £100, or to imprisonment with or without hard labour for a term not exceeding six months, or to such fine and imprisonment, or to such imprisonment without a fine.

W. H. MILTON,

Administrator.

By command of His Honour the Administrator,

F. J. NEWTON,

Treasurer.

SUMMARY OF "THE GAME LAW CONSOLIDATION ORDINANCE, 1906," AND REGULATIONS ISSUED THEREUNDER.

The Ordinance divides the game into three distinct classes, described as follows:—

- (a) Birds and Small Buck.
- (b) Bushbuck, Hartebeest, Impala, Lechwe, Pookoo, Roan and Sable Antelope, Sitatunga, Tasessibe, Waterbuck and Wildebeest.
- (c) Royal Game, which includes Eland, Elephant, Giraffe, Gemsbok, Hippopotamus, Inyala, Koodoo, Ostrich, Rhinoceros, Springbuck and Zebra.

The shooting season for Class "A" is as follows:—

In Mashonaland:

Birds from 1st May to 30th September.

Small Buck from 1st May to 31st October.

In Matabeleland:

Birds and Small Buck from 1st May to 31st October.

To shoot in Class "A" a licence costing £1 per annum is required. This entitles holders to hunt in both Provinces during the open season.

Class "B."—The season opens on 1st July and closes on 30th November in both Provinces. The licence fee is £25 for non-residents and £5 for persons having their domicile in Southern Rhodesia. This licence entitles the holder to shoot up to 15 head, which number may be increased to a total of 25 upon payment of a further sum of £15 in the one case and £5 in the other.

Class "C."—The Administrator may, if he is satisfied that the animals are actually required for scientific purposes, grant to the holder of a game licence permission to shoot or capture any of the species included in this Class. Such permit requires a £5 stamp. Applications in writing, together with proof of *bona fides*, should be addressed to the Secretary for Agriculture.

Game for Farming Purposes.—Permits are granted for the capture of Eland, Ostrich, Zebra or other animals for the purposes of breeding or farming. Such permits require a stamp of the value of £1 and remain in force for six months. Application, accompanied by a sworn declaration, should be made through the Secretary for Agriculture or the Civil Commissioner of the district.

Game Injuring Crops.—The occupier of any cultivated land or any person acting under the authority of such occupier, may at any time destroy game actually doing damage in such land.

Elephants on occupied farms. Melsetter.—The destruction of Elephants when found on occupied farms on the High Veldt in Melsetter District is authorised (*Vide* Government Notice No. 284 of 1908).

Tsetse Fly, Hartley District.—Government Notice No. 40 of 1909 withdraws the Close Season for Class "B" in a certain area in the Hartley District until 30th June, 1910, and transfers from Class "C" to Class "B" Eland, Koodoo, and Zebra so far as that area is concerned. This means that these species may be shot by Residents of Southern Rhodesia on a £5 licence, and by non-Residents on a £25 licence, in this area, at any time up to the 30th June, 1910, in addition to the game described in Class "B."

Game in Class "A" may be hunted in the close season ending 30th April, 1909, on private land in the Melsetter District by holders of a licence.

Protected Areas.—No game may be hunted or killed within the limits of the Commonages or Townlands of Salisbury, Bulawayo, Umtali and Melsetter; within a radius of two miles of the Court House, Gwelo, or within the Urungwe Game Sanctuary, as defined by Government Notice No. 237 of 1906.

'Locust Birds' are strictly protected, *vide* Government Notice No. 121 of 1907.

Export of Game.—No living Game or the Eggs of any Game birds may be exported beyond the limits of Southern Rhodesia without a written permit.

Shooting on Private Land.—A licence does not entitle the holder thereof to shoot on private land without the permission of the landowner.

No. 9 of 1907.

NORTH-WESTERN RHODESIA.

WHEREAS there is reason to believe that certain diseases in cattle exist in the Territory of Southern Rhodesia, the Bechuanaland Protectorate, German West Africa, Portuguese West Africa, and Portuguese East Africa, and it is therefore expedient to take measures to prevent the spread of such diseases to North-Western Rhodesia.

Now, therefore, under and by virtue of the powers in me vested by Section 2 of His Excellency the High Commissioner's Proclamation, No. 18 of 1906, bearing date the 31st day of July, 1906, I do hereby order and declare and make known as follows:—

1. That Government Notices, No. 2 of 1902, and No. 11 of 1906, are hereby withdrawn, and the following Regulations substituted:
2. The introduction of any bull, ox, cow, heifer or calf or the meat of any such animals, into the Territory of North-Western Rhodesia from the Territories of Southern Rhodesia, the Bechuanaland Protectorate, German West Africa, Portuguese West Africa, and Portuguese East Africa, is prohibited until further notice.
3. No person shall introduce into the Territory of North-Western Rhodesia from the Territories aforesaid, any horse, mare, gelding, mule, donkey, sheep, goat or pig, horns or skins, or any kind of vehicle, wagon gear, trek gear, or harness, without having first obtained the special permission in writing of a District Commissioner, Civil Commissioner, or other person thereto authorized by me; and such animals, horses, skins, vehicles, gear, or harness, shall enter the Territory of North-Western Rhodesia at such place, and under such conditions as regards quarantine and disinfection, as shall be ordered by the person issuing such written permission as is above described.
4. Whenever any conditions as to quarantine, isolation, disinfection or otherwise, are imposed, such conditions shall be fulfilled at the sole risk and expense of the owner, consignee, or other person concerned.
5. All live stock imported into the Territory by rail by way of Victoria Falls and Livingstone, shall be inspected at Livingstone Station, and, whenever disinfection is ordered, shall be disinfected at that Station.
6. In the case of live stock consigned to any point on the railway line north of Livingstone Station, the officer authorized to issue the written permission aforesaid shall further order the disinfection of the truck or horse-box in which such stock is being conveyed. Such disinfection shall be carried out at the expense of the owner or consignee of the stock, or other person concerned therein.
7. Consignors and importers of live stock shall give not less than seven days' notice of the arrival of such stock at Livingstone Station. Such notice shall be given to the Civil Commissioner, Livingstone, or to such other official as may hereafter be appointed.

ROBERT CODRINGTON,
Administrator.

By command of His Honour the Administrator,

HENRY RANGELEY,
Acting Secretary.

Administrator's Office,
Livingstone, North-Western Rhodesia,
30th September, 1907.

No. 282 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 24th September, 1908.

"ANGORA GOAT AND OSTRICH EXPORT PROHIBITION
ORDINANCE, 1907."

Exportation to certain States and Colonies permitted.

IT is hereby notified for public information that whereas legislation has been enacted and promulgated prohibiting the exportation of Angora Goats, Ostriches and Ostrich Eggs from the province of Mozambique, the Colony of the Cape of Good Hope, Natal, Transvaal and the Orange River Colony, except to such South African States and Colonies as have enacted similar prohibitive legislation, the exportation of Angora Goats, Ostriches and Ostrich Eggs is *ipso facto* permitted to the Province of Mozambique, the Colony of the Cape of Good Hope, Natal, Transvaal, and the Orange River Colony.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council.

F. J. NEWTON,
Treasurer.

No. 316 of 1908.

Department of Agriculture,
Administrator's Office,
Salisbury, 15th October, 1908

"ANGORA GOAT AND OSTRICH EXPORT PROHIBITION
ORDINANCE, 1907."

IT is hereby notified for public information that whereas legislation has been enacted and promulgated prohibiting the exportation of Angora goats, ostriches and ostrich eggs from the territories of Basutoland, Swaziland and the Bechuanaland Protectorates, except to such South African states and colonies as have enacted similar prohibitive legislation, the exportation of Angora goats, ostriches and ostrich eggs is *ipso facto* permitted to the territories of Basutoland, Swaziland and the Bechuanaland Protectorate.

F. J. NEWTON,
Acting Administrator

By command of His Honour the Acting Administrator in Council

P. D. L. FYNN,
For Treasurer

No. 5 of 1909.

Department of Agriculture,
Administrator's Office,
Salisbury, 7th January, 1909.

AFRICAN COAST FEVER.

UNDER and by virtue of the powers conferred upon me by the "Animals Diseases Consolidation Ordinance, 1904," I do hereby cancel Government Notice No. 207 of 1908, and amend Government Notice No. 217 of 1907, by extending the provision of section 6 thereof to the movement of working cattle in the native district of Ndanga, and that part of the native district of Victoria lying to the north of the Ndanga main road.

W. H. MILTON,
Administrator

By command of His Honour the Administrator in Council.

P. D. L. FYNN,
Acting Treasurer.

No. 6 of 1909.

Department of Agriculture,
Administrator's Office,

Salisbury, 14th January, 1909.

'ANGORA GOAT AND OSTRICH EXPORT PROHIBITION ORDINANCE, 1907.'

EXPORTATION OF ANGORA GOATS TO CERTAIN STATES AND COLONIES PERMITTED.

IT is hereby notified for public information that whereas legislation has been enacted and promulgated prohibiting the exportation of Angora goats from the Territory of German South West Africa, except to such South African States and Colonies as have enacted similar prohibitive legislation, the exportation of Angora goats is, *ipso facto*, permitted to the Territory of German South West Africa.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council

P. D. L. FYNN,
Acting Treasurer

Ordinance No. 1, 1908.]

[Promulgated 18th December, 1908.

SOUTHERN RHODESIA.

AN ORDINANCE TO FURTHER AMEND THE LAW WITH REFERENCE TO THE BRANDING OF STOCK.

BE IT ENACTED by the Administrator of Southern Rhodesia, with the advice and consent of the Legislative Council thereof, as follows:—

1. Sections 7, 8, 9, 10 and 13 of "The Brands Ordinance, 1900" (hereinafter referred to as the said Ordinance), and so much of any other law as is repugnant to or inconsistent with the provisions of this Ordinance are hereby repealed; but such repeal shall not be taken to affect the validity of any brand duly registered at the time of coming into operation of this Ordinance.

2. No person shall have the right of claiming to have any special form or design of brand allotted to him, but any person requiring a brand shall, on application, and on payment of the prescribed fee, have a brand allotted to him by the Registrar.

3. Section 23 of the said Ordinance is hereby amended by the addition of the following sub-section:—

"(6) The system and procedure to be observed by the Registrar in allotting brands."

4. This Ordinance may be cited for all purposes as the "Brands Ordinance Amendment Ordinance, 1908."

Above is the text of the Ordinance passed during the last Session of the Legislative Council, the object of the Ordinance being to so amend the Brands Ordinance, 1900, as to permit of the system of branding known as the "Three piece system."

Following are the regulations promulgated under the Ordinance, and which brought the new system of registration into operation on 7th January, 1909.

No. 391* of 1908.

Department of Agriculture,

Administrator's Office,

Salisbury, 17th December, 1908.

BRANDS ORDINANCE AMENDMENT ORDINANCE, 1908.

UNDER and by virtue of the powers vested in me by "The Brands Ordinance, 1900," as amended by the "Brands Ordinance Amendment Ordinance, 1908," I do hereby cancel and withdraw the Regulations published under Government Notice No. 204 of 1900, and declare the following shall be in force in lieu thereof, from and after the 7th January, 1909 :—

1. The Registrar of Brands shall have his office in the Agricultural Department. With the exception of the Magistrate of Salisbury, the Magistrate in each district of Southern Rhodesia, and the Assistant Magistrate in each sub-district, shall be a deputy Registrar of Brands for the magisterial district or sub-district to which he is appointed. The offices of the Deputy Registrars of Brands shall be the offices of the several Magistrates.

2. (a) The form of application for registration of a brand shall be that marked "A" in the schedule attached to this Notice.

(b) The form of a certificate of registration shall be that marked "B" in the said schedule.

(c) The form of a transfer of a brand from one registered proprietor to another shall be that marked "C" in the said schedule.

(d) The form of a certificate of such transfer shall be that marked "D" in the said schedule.

3. Each Deputy Registrar of Brands shall keep a register, in the form of Schedule "E" hereto, of all brands allotted within his district under the provisions of the Ordinance.

4. Save as hereinafter provided, every registered brand shall consist of two letters and a numeral of plain and uniform pattern; and the first of the letters shall indicate the magisterial district or sub-district in which the holding is situate on which the brand is to be used, and shall be placed above the numeral and letter comprising the brand, so as to be in triangular form.

5. One brand and no more shall be allotted to any person in one magisterial district or sub-district.

6. The size of the characters branded on stock shall not be more than three inches in height nor more than two inches in width.

7. An applicant for a brand shall be allotted the next vacant brand assigned to the district in which he is located, as set forth in Schedule "F" hereof.

8. Each Deputy Registrar shall keep a list of brands assigned to his district, for the inspection of applicants for brands.

9. There shall be payable to the Registrar or Deputy Registrar :—

(a) For every separate registration of a brand, 5s.

(b) For every transfer of a brand, 5s.

10. All brands shall be imprinted on stock as follows :—

(a) In the case of horses, mules or donkeys, the first brand shall be imprinted either on the near side of the neck or near rump, and any second or subsequent brand shall (where there is sufficient space for such purpose) be imprinted on the same part of such animal, and at a distance of not less than one and a half inches from and directly underneath last imprint, according to the table herein set forth.

Where there is not sufficient space for the purpose, then such second or subsequent brand shall be imprinted on the part of such animal next in order, according to the following table :—

- i. Off Neck or Rump (or Thigh) ;
- ii. Near Shoulder (or Top of Arm) ;
- iii. Off Shoulder (or Top of Arm).

(b) In the case of cattle, the first brand shall be imprinted on the near rump or thigh of the animal, and every second or subsequent brand shall be imprinted at a distance of not less than one and a half inches from and directly underneath the brand last imprinted, according to the following table :—

- i. Off Rump (or Thigh) ;
- ii. Near Shoulder (or Top of Arm) ;
- iii. Off Shoulder (or Top of Arm).

(c) In the case of sheep and goats, the first brand shall be imprinted on the near shoulder, and all second or subsequent brands in the following order :—

- i. On Near Side or Ribs ;
- ii. Near Rump (or Thigh) ;
- iii. Off Shoulder ;
- iv. Off Side or Ribs ;
- v. Off Rump (or Thigh).

(d) In the case of ostriches :—

- i. On near Thigh ;
- ii. On Off Thigh.

11. Each proprietor of a registered brand shall have the right, in addition to imprinting his brand in the manner above prescribed, to place such brand on the ears of such animals by punching, tattooing or ear-rivets.

12. The owner of any brand may surrender the same, and the Registrar shall, on receipt of notice thereof, cancel the registration by notice in the *Gazette*.

13. When it appears to the Registrar, upon the report of a Deputy Registrar, Native Commissioner, or Cattle Inspector, that a registered brand is not in use, he may cause notice thereof to be given to the owner thereof, calling upon him to show cause why the same should not be cancelled ; if cause is not shown to the satisfaction of the Registrar within six months after such notice, he may cancel the brand.

14. No brand which has been surrendered or cancelled shall be re-allotted until a period of five years from such surrender or cancellation has elapsed.

15. The Registrar shall, at the end of each quarter in every year, or as soon thereafter as possible, transmit for publication in the *Gazette* a statement, in the form of Schedule " E " hereto, of all brands registered under the Ordinance up to the last day of such quarter.

16. The Registrar shall allot a brand to every public pound already or hereafter to be established, and shall register the same.

The first character of every such brand shall be a diamond, and the second the dominant letter of the magisterial district or sub-district, and the third a numeral, the dominant letter to be placed above the diamond and numeral so as to form a triangle ; and the Poundmaster shall, on sale of any stock impounded therein, brand the same with such brand on the portions and in

the order prescribed in these Regulations, to show that the said brand is the last brand at that time imprinted on such stock; and any Poundmaster who shall fail to comply with the provisions of this section shall on conviction be liable to a fine not exceeding £5.

W. H. MILTON,
Administrator.

By command of His Honour the Administrator in Council

2654 P. D. L. FYNN
Acting Treasurer.

SCHEDULE A.

APPLICATION FOR A BRAND

Brands Ordinance, 1900, and Brands Ordinance Amendment Ordinance, 1908.

To the Deputy Registrar,

Herewith ^{we}
I enclose the prescribed fee of and request that you will allot and register a brand for the holding or place mentioned in the Schedule below.

Name of Applicant in full.	Address.	District or Sub-district for which Brand is required.

Date.....

Applicant.

SCHEDULE B.

Brands Ordinance, 1900, and Brands Ordinance Amendment Ordinance, 1908.

No.....
.....day of.....

I hereby certify that the brand shown in the diagram at foot hereof was duly registered on the date and as the brand of the person(s) therein set forth in the schedule hereto.

Owner(s)' full Name.	Address.	District for which Brand is registered.	Date of Registration.

Fee paid.....

Diagram of Brand.....

(Signed).....

Registrar of Brands

SCHEDULE C.

MEMORANDUM OF TRANSFER OF BRAND.

Brands Ordinance, 1900, and Brands Ordinance Amendment Ordinance, 1908.

We,being the registered owner(s) of the
 I,of..... and hereby
 request that the same may be registered accordingly. And we
 Ithe second undersigned, do also hereby agree to the said
 transfer and enclose the fee therefor (..... Shillings).

Witness.....Owner.
 Address.....

Witness.....Transferee.
 Address.....

Brand.	Name and Address of Registered Owner of Brand.	District where Brand is Registered.	No. of Certificate.	Date of Registration.

SCHEDULE D.

CERTIFICATE OF TRANSFER.

Brands Ordinance, 1900, and Brands Ordinance Amendment Ordinance, 1908.

No.....Date.....

This is to certify that the brand shown at the foot hereof was this day
 transferred from..... of
 to.....of.....

Fee paid £..... Dated this..... day of

Registrar of Brands.

Brand.	Transferee's Name and Address.	District where Brand is to be used.	No. of Certificate.	Date of Registration.

SCHEDULE E.

DISTRICT BRANDS REGISTER.

Brands Ordinance, 1900, and Brands Ordinance Amendment Ordinance, 1908.

Name of Registered Owner.	Address.	District for which Brand is Registered.	Particulars of Brand.		
			Brand Allotted.	No. of Certificate.	Date of Registration.

SCHEDULE F.

Brands allotted to different magisterial districts and sub-districts.

Dominant Letter.	District denoted.					Brands Series.
A	Salisbury	..	..	..	..	A 2 A and variations.
						A A 2
B	Bulawayo	..	..	..	..	B 2 A "
						B A 2 "
C	Charter	..	..	..	..	C 2 A "
						C A 2 "
E	Belingwe	..	..	..	..	E 2 A "
	(Sub-district of Bulawayo)	..	..	..	..	E A 2 "
F	Mangweni	..	..	..	..	F 2 A "
	(Sub-district of Salisbury)	..	..	..	..	F A 2 "
G	Gwelo	..	..	..	..	G 2 A "
						G A 2 "
H	Hartley	..	..	..	..	H 2 A "
						H A 2 "
J	Bubi	..	..	..	..	J 2 A "
	(Sub-district of Bulawayo)	..	..	..	..	J A 2 "
K	Wankie	..	..	..	..	K 2 A "
	(Sub-district of Bulawayo)	..	..	..	..	K A 2 "

Dominant Letter.	District denoted.	Brands Series
L	Lomagondi	L and variations. 2 A
	(Sub-district of Salisbury)	L A 2
M	Mazoe	M 2 A
	(Sub-district of Salisbury)	M A 2
N	Bulilima-Mangwe	N 2 A
	(Sub-district of Bulawayo)	N A 2
P	Mafungabusi	P 2 A
	(Sub-district of Gwelo)	P A 2
R	Chibi	R 2 A
	(Sub-district of Victoria)	R A 2
S	Melsetter	S 2 A
		S A 2
T	Tuli	T 2 A
		T A 2
U	Umtali	U 2 A
		U A 2
V	Victoria	V 2 A
		V A 2
W	Gwanda	W 2 A
	(Sub-district of Bulawayo)	W A 2
X	Makoni	X 2 A
	(Sub-district of Umtali)	X A 2

* NOTE.—Reserved for distribution (if required), all brands with the numerals as dominants, thus—2 AA to 9 ZZ. Permanently reserved, the letters O and I (to be used exclusively as numerals). The letters O, Y and Z are unallotted. The letter D reserved for Government Departments.

Departmental Notices.

As Assistant Magistrates have not been appointed to all the Districts and Sub-districts to which a series of Brands have been allotted, the registration of Brands in

such Districts will be carried out by the Officers enumerated in the following notice, which was published for the information of stock-breeders :

DEPARTMENT OF AGRICULTURE.

NOTICE.

BRANDS ORDINANCE AMENDMENT ORDINANCE, 1908.

With reference to the regulations published under Government Notice No. 391 of 1908, it is hereby notified for public information that the undermentioned Officers are the Deputy Registrars and Registrars of Brands for the Districts or Sub-districts set opposite their names.

Districts and
Sub-districts.

Deputy Registrar.

Bubi	Assistant Magistrate, Inyati.
Bulalima Mangwe	Assistant Magistrate, Yegwani.
Charter... ..	Magistrate, Enkeldoorn.
Chibi	Magistrate, Victoria.
Mafungabusi	Magistrate, Bulawayo.
Makoni... ..	Magistrate, Umtali.
Mangwendi	Registrar of Brands, Salisbury.
Wankie	Magistrate, Bulawayo.
Tuli... ..	Magistrate, Gwanda.

E. ROSS TOWNSEND.

Registrar of Brands.

Salisbury, 21st January, 1909.

For the information and guidance of Stockowners the following notes and directions are published :—

1. All brands registered under the old system prior to the 7th January, 1909, will continue to be current, except in cases where the registered owners have ceased to use them ; all obsolete brands will in due course be cancelled.
2. Printed forms of application for brands have been supplied to every Deputy Registrar of Brands, *i.e.*, to the Magistrates and Assistant Magistrates of the Districts and Sub-districts to which a series of brands have been allotted.

Applicants for brands should fill in the form, and forward, with the registration fee, to the Deputy Registrar of the District for which the brand is required.

On receipt of the application the Deputy Registrar will allot the next brand vacant on the list, and will issue a Registration Certificate, after which the applicant will be entitled to the exclusive use of the brand.

3. All brands will consist of two letters of the alphabet and a numeral of plain and uniform pattern, and will be in the form of a triangle, the dominant letter of the District forming the apex, and a numeral and letter forming the base, thus for the district of Salisbury the first brand allotted would be "A"

2 A

4. The maximum size of a brand is fixed at three inches in height, and two inches in width; the object of limiting the size of brand is to prevent the use of brands which make an unsightly impression, causing unnecessary pain to the animal, and damage to the hide.

Stockowners are urged to make their brands as small as possible consistent with clearness, and with as fine a burning edge as possible, to insure a sharp, clear impression on the hide.

5. Rules for branding.

These are clearly set forth in Section 10 of the regulations which has been printed on the back of the Registration Certificate for the guidance of owners.

The order of placing the brand as laid down in the regulations must be strictly followed.

The object in prescribing the order in which brands are placed on an animal is to insure that the owner of lost, straying, or stolen stock being readily traced. If brands are placed indiscriminately on an animal which has changed hands frequently, it is not possible to trace the registered owner without considerable delay ensuing, whereas if brands are impressed in proper rotation, the owner of the brand last impressed on the animal can be readily traced.

6. The owners of registered brands have the right to, in addition to imprinting their brands in the order prescribed, place such brand on the ears of animals by punching, tattooing, or ear-rivets.

7. Registered owners of brands have the right to surrender their brands, and brands surrendered will be cancelled. In cases where it is found that registered brands are not being used, the Registrar may call upon the owner to show cause why it should not be cancelled, and if cause is not shown, such brand may be cancelled. No brand which has been surrendered or cancelled can be re-allotted for 5 years from date of cancellation.

8. With a view of ensuring accuracy and uniformity in the making of branding irons, special arrangements will be made with local firms of blacksmiths to supply branding irons at a contract price.

An applicant for a brand may, on depositing the cost of branding iron, receive from the Deputy Registrar a requisition for a branding iron to be supplied by the contractor.

DESTRUCTION OF WILD CARNIVORA, ETC.

It is hereby notified for public information that the Notice issued by this Department, dated 8th June, 1906, offering certain rewards for the destruction of wild carnivora, etc., will, *after 31st March, 1908*, cease and determine, and thereafter rewards will be paid only on the scale and conditions herein set forth.

2. Rewards will be paid as follows:—

For each Lion	£3	0	0
„ Leopard	1	0	0
„ Cheetah	1	0	0
„ Wild Dog	0	10	0
„ Crocodile, of not less than 3 ft. in length ...	0	10	0

3. Rewards will be paid to Europeans by the Magistrate or Native Commissioner, and to natives by the Native Commissioner of the district, within three months of the date upon which the animal is killed, on a declaration made in the form of the annexure hereto.

4. In proof of destruction, applicants for rewards will be required to produce and surrender, in the case of Lion, Leopard or Cheetah, the skin with the tail not severed, and in the case of Crocodile or Wild Dog, the unskinned head.

5. The skins and heads of animals for which rewards have been paid shall be the property of the Government, and shall be disposed of in such manner as may be decided on.

E. ROSS TOWNSEND,

Secretary for Agriculture.

FARM APPRENTICES.

The Secretary for Agriculture would be glad to receive the names of farmers willing to take students from overseas for instruction in South African farming.

He also wishes to make it known that a large number of young Colonials with experience are anxious to obtain situations on farms in Rhodesia. Farmers are now invited to state on what terms they would offer to take these—sending in the full particulars to this Department as early as possible.

STRYCHNINE.

Stockowners can obtain a limited quantity of strychnine for the destruction of carnivora at a cost of 4s. 6d. per ounce.

GOVERNMENT STALLION FOR PUBLIC STUD.

The Stallion "Robber Knight" has been returned to Salisbury, where his services for a limited number of mares will be available until further notice, free of charge.

Applications, giving full particulars of the mares to be served, should be addressed to the Veterinary Department, Salisbury, where further particulars can be obtained.

The owners of mares brought to stud will have to make all necessary arrangements for attendance, stabling, and feeding of their animals, as the Department can take no responsibility whatever.

As the number of mares which can be served is very limited, the Veterinary Officer in charge is instructed to refuse service if any mare submitted is suffering from any hereditary disease, or is of an inferior type.

Pedigree.—"Robber Knight" by "Sir Hugo," *ex* "Fritters" by "St. Simon."

The Chief Veterinary Surgeon requests that all Official Correspondence be addressed to the

CHIEF VETERINARY SURGEON,
Box 123,
SALISBURY.

Communications referring to various Departmental matters are frequently addressed to him personally, with the result that they remain unopened and unattended to in case he is absent on duty.

VAPORITE.

The new preparation, "Vaporite," suitable for the destruction of cut-worms, wire-worms, white ants, and other soil-infesting pests, can be obtained from the Department in quantities of not less than 2 cwt. at 17s. 6d. per cwt. Application to be accompanied by remittance covering cost and transport charges.

TOBACCO SEED.

The following varieties of tobacco seed may now be obtained by planters from this Department at the prices named, which include postage. Orders must be accompanied by remittance.

	per oz.	
	s.	d.
Turkish, Yenedje, Xanthi, Aya Solouk	1	6
Turkish, Cavalla	1	6
Goldfinder (a bright Virginia leaf, when flue-cured, brighter than Hester)	1	2

TOBACCO SEED BED COVERING.

A large supply of calico for covering tobacco seed is now available. It can be obtained from the Anglo African Trading Company at Salisbury, Bulawayo, and Gwelo. Price 2½d. per square yard.

CULTURE OF TOBACCO.

This book, by G. M. Odlum, containing the History of the Tobacco Plant from seed to manufacture, can be obtained from this Department. Price 2s., post free 2s. 4d.

WATER BORING.

It is hereby notified for the information of farmers that the Government has secured the services of Mr. H. M. Oakley, for a period of three months, for the purpose of advising as to the prospects of obtaining a sufficient supply of water by boring, and the best sites for sinking bore-holes.

Mr. Oakley will arrive early next month, and those wishing to avail themselves of his advice, for which no charge will be made, should at once communicate either with the Secretary of their Farmers' Association, the Civil Commissioner of the district, or the undersigned.

ERIC A. NOBBS,

Director of Agriculture.

Department of Agriculture,
Salisbury, March 2nd, 1909.

DISTRIBUTION OF SEED GRAIN FOR EXPERIMENTAL PURPOSES BY THE DEPARTMENT OF AGRICULTURE.

With the view of gaining further information as to the best varieties of the different crops for autumn sowing under irrigation, a quantity of seed is being procured by the Department of Agriculture for distribution to farmers throughout Southern Rhodesia.

The different seeds will, as far as supplies admit, be delivered free at their nearest station, to farmers making application, and undertaking to furnish the Department with reports of the results attained and methods of cultivation.

Seeds will be given out in quantities to sow from a quarter to half an acre of each variety, and not more than two sorts to each applicant.

It must be understood that the Department in no way guarantees the suitability of these seeds. It is with the object of ascertaining their value that these trials are instituted, and to gain experience which may be of use to the farming public in the future.

It should be realised that the parcels supplied are purely for experimental trial. It is not proposed to sell seed to farmers for growing on a large scale, this being regarded as more properly the sphere of commercial firms.

The following is a list of the seeds at present available:—

Gluyas Wheat (Rust resistant).
 Rietti Wheat (Rust-resistant).
 Cape Barley (Six Row).
 Chevalier Barley (Two Row).
 Beardless Barley.
 Barley Wheat.
 Rye.

INQUIRIES.

Farmers are reminded that in all matters relating to agricultural practice, advice is given by the Department in response to inquiries made by them individually.

In particular subjects, such as disease among crops, insect pests and the like, specimens should be sent to the Department, together with as full details as possible.

Inquiries will be made on behalf of farmers who want farm machinery and appliances, seeds, trees, etc.

All communications should be addressed in the first instance to the Director of Agriculture, Salisbury.

INSTRUCTIONS FOR TAKING SAMPLES OF SOIL FOR ANALYSIS.

In taking samples of soil for analysis, it is important that they should be of a truly representative character; and, when sending them in to the Department, it should be stated for what purpose it is intended to use the land, whether for cereals, tobacco, lucerne, fruit-growing, etc. If much difference exists in the area to which the analysis is intended to refer, a separate sample of each of the different soils should be forwarded.

Samples should be taken as follows:—

Dig several holes 3 feet deep, the number varying according to the size of the land, care being taken to avoid tree roots, and hills, or any spots marked by rank vegetation or the absence of vegetation. Select the hole showing the most representative character, and from the side of it cut a section with a knife or trowel, about 2 inches square and 10 inches deep, first clearing off the top vegetation. Place this section in a

bag by itself (No. 1), then take another section below the first, about 14 inches deep, and put in a separate bag (No. 2); below the second section take a third, about 12 inches deep, and place in a third bag (No. 3). If rock is encountered before this section can be cut, send a sample of the rock, about 1 lb. weight.

When the sample is of cultivated land, the top section should be taken from each of the holes made and thoroughly mixed, and about 4 lbs. of the mixture sent for analysis; 2 or 3 lbs. each of the other sections, taken at the depths mentioned above, from one hole only, is sufficient. When forwarding the samples, as much information as possible should accompany them; such as, whether the situation is near a river, if from sloping or level ground, the behaviour of the land under much rain or severe drought, if it yields good crops or poor, if kraal or other manures have been applied recently and in what quantities.

Samples should be addressed to: The Secretary for Agriculture, Agricultural Department, Salisbury, and accompanied in all cases with full particulars as set forth above. No attention will be paid to samples sent without full details.

Schedule of Charges made for Analysis in the Agricultural Laboratory, Salisbury.

	£	s.	d.
1. Estimation of two or three constituents in mineral or other manures	0	15	0
2. Analysis of water for stock or irrigation purposes	1	0	0
3. Estimation of Lime or Phosphoric Acid in rock specimens	0	15	0
4. Partial analysis of soil—Mechanical analysis and determination of one or two constituents	2	0	0
5. Complete analysis of soil	3	0	0

At present no charge will be made to *bona fide* farmers. The charges in the above schedule are for products sent in by merchants, dealers, and others interested in trade.

The Analyst will exercise his discretion as to the examination of all samples, whether they are of sufficient importance for determination.

The right of publishing the result of any analysis is reserved by the Department.

EXPORT OF SOUTH AFRICAN HAY TO GREAT BRITAIN.

The following wire has been received by His Honour the Administrator from His Excellency the High Commissioner relating to the export of hay from South Africa:

“Johannesburg, April 27th, 1908.

“I have received notification from the Secretary of State for the Colonies that, owing to risk of spread to farm stock in Great Britain of disease known as African Coast Fever through the medium of hay from South Africa, Board of Agriculture are taking steps under Diseases of Animals' Acts, 1894 to 1903, to prevent its importation unless and until they are satisfied that disease has been eradicated from South Africa.

“You should accordingly warn intending shippers that His Majesty's Government will probably take steps to prevent such hay being landed in Great Britain. The Board of Agriculture notifies that its interpretation of the term ‘Hay’ includes all dried fodder plants that have not had their seeds removed, and that term as used in this correspondence is intended to cover oat hay, vetch hay, lucerne hay (Alfalfa), as well as ordinary grass and clover hay.”

Editorial Notices.

Original subscribers to the *Journal*, who have complete sets of the earlier numbers to dispose of, are requested to communicate with this office, as numerous enquiries for the first and second volumes, now out of print, have been received.

Subscriptions to the *Journal* (5s.), issued bi-monthly, should be addressed to the Director of Agriculture, Agricultural Department, Salisbury. Only communications relating to the literary department should be addressed to the Editor, and if an answer is required in the

pages of the *Journal*, should reach this office not later than the 15th of the month preceding publication. Subscribers are requested to notify immediately the non-delivery of the *Journal*.

Farmers requiring latest market prices for produce and live stock at Kimberley, Johannesburg, Bulawayo, Gwelo, Salisbury, Umtali, and Beira, can obtain same from this office by next mail or prepaid wire.

Advertisements will be accepted from *bona fide* farmers wishing to effect sale, purchase or exchange of produce, live stock, or farm implements, at a minimum charge of 2s. 6d. per insertion of 20 words. Extra words will be charged for at the rate of 1s. for every ten words.

Applications for Advertisement Rates to be made to J. Kapnek, Sole Advertisement Contractor for "Rhodesian Agricultural Journal," P.O. Box 91, Salisbury and Box 45 Bulawayo.

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Farmer's Advertisements.

PERSIAN Ram Lambs for sale, from pure bred stock imported from Cape Colony. Apply H. E. Light, c/o. Meikle Bros., Salisbury.

BREEDER of Dairy Cattle has on hand Young Bull Calves from Cape Cows (Frieslands), £10 each, taken at 8 months.—C. C. Macarthur, Box 284, Salisbury.

ADVERTISEMENTS.

FOR SALE.

PERSIAN RAM LAMBS.

A limited number of three quarter bred acclimatised Ram Lambs for disposal, eight months old; £2 each, Marandella Station.—Apply H. Hay Scorrer, Land Settlement Farm, Marandella.

IMPORTATION OF PEDIGREE STOCK.

With the view of facilitating the importation of Pedigree Stock into Rhodesia from overseas, the undersigned is prepared to receive orders for animals for breeding purposes.

Being in communication with Messrs. Reith and Anderson, of Aberdeen, Scotland, that firm will be employed in furnishing Aberdeen-Angus and Shorthorns of the type and quality that came forward in the recent consignment, and which gave so much satisfaction.

Farmers desiring animals of any other different breed may obtain them through the same agency, including Red Polls, Lincoln Reds, N. and S. Devons, Herefords, Sussex, Jerseys, Alderneys, and Galloways.

A consignment is being organised for coming forward about the end of June, and intending applicants are requested to send orders by the 15th March.

For full particulars apply to—

W. H. WILLIAMSON,

Salisbury.

Telegraphic Address: "Williamson," Salisbury.

January 18th, 1909.

MESSRS. McLAURIN BROS.

(Breeders of Pedigree Friesland Cattle.)

Orders are being booked for young pure-bred Friesland Bulls bred from pedigree sire and dam.

These Bulls are bred and reared on the Farm Pomona, near Salisbury, a Redwater area, and thus farmers may obtain highly bred animals without the usual risks attending importation and immunising.

Particulars of pedigree and prices will be obtained on application to Messrs. McLaurin Bros., Salisbury.

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